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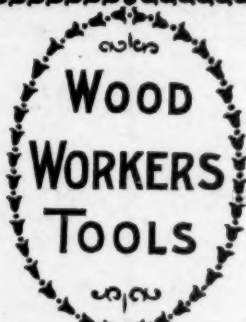
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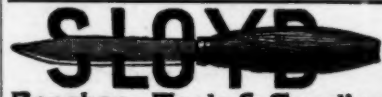
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Value of Science in School Training.

By Robert H. Cornish.

Science is classified knowledge. When the facts of language, of mathematics, of history, or of literature are put into orderly arrangement, are grouped according to their relationship, and are explained by laws, then we have the science of language, of mathematics, or of literature. Science, thus considered, includes all school studies, and students of the branches just mentioned are students of science. This is not the use of the word in our subject. According to another and more restricted use of the word, science includes a classified knowledge of things objective; that is of things that have their existence outside the human mind. Bunker Hill and patriotism, broad fields and contentment, the ocean and sublimity may be synonymous terms, but as objects of study the surface of the earth and the ocean are fundamentally different from hope and contentment.

Science, then, is classified knowledge of the facts and phenomena of the physical universe with an explanation of the reasons of these phenomena, so far as the reasons are understood. But the physical universe is a very large affair, and it is constantly growing larger through our increased knowledge of it. The men who attempt to include the whole range of the physical universe in their studies are very few. Humboldt was perhaps the last of a line of scientific workers who kept in touch with all branches of science, and made contributions to all. Scientific workers divide and sub-divide their work, and thus we have developed those great branches of scientific study of which physics, biology, and astronomy are examples. These branches of science or sciences are grouped into two great divisions; (1) the physical sciences or those which deal with matter and energy. Physics, chemistry, and geology are physical sciences. (2) Those which deal with matter, energy, and an added something called life. This group constitutes the biological sciences and includes botany and zoölogy as principal members.

The time has gone by when it was necessary to enter into any defense of the place of science in a general education. There was a time when the sciences were not recognized as necessary in a college course, much less in a secondary school. Latin, Greek, and mathematics, with mental and moral science, which were not science at all, were about the only things studied at Yale college one hundred years ago. The colleges all over

the country have now admitted science studies into the general curriculum. In many colleges the science courses are elementary in character and differ not at all from those given in many high schools. Into secondary schools which prepare for college the admission of science studies has been slower than into colleges themselves. Time forbids entering into a full discussion of the reasons for this. I agree with those who say that any subject that knocks for admission at the door of our already crowded curriculum should justify its claim. I agree with Prof. Remsen, who says that slipshod laboratory work in science is a very poor substitute for a good course in Greek or mathematics. If science courses in college or the academy are "snap" courses, if they do not, as a rule, give either the mental training or spiritual quickening that come from other courses they would better be thrown out. In order to understand better the value of science in school training allow me to describe the scientific method of work.

I think it is of more value to the student to understand the scientific method, to develop the scientific habit of mind than it is to acquire a few, or even many, facts about a particular science. The scientific method has the following steps: (1) The collection of facts. This involves observation, classification, comparison, measurement. If the objects dealt with cannot be measured, if they cannot be counted, or weighed in a balance, then they do not belong in the realm of the sciences that I am considering. These observations it may take years to collect. This part of the work is of great importance. Every notable scientific achievement rests upon a long-continued series of patient observations. (2) The enunciation of a general law, which groups and explains the facts. This is called induction or generalization. The larger the group of facts examined, the wider the generalization must be to include them all. (3) The third step is verification by experiment. This tests the law discovered by applying it to a new case or by bringing forward facts not known when the law was enunciated which prove or disprove it. If our facts cover a very wide range of phenomena, especially if they belong to different sciences, or possibly to all sciences, then the generalization which groups and explains them is called an *hypothesis*. This is an effort of the scientific imagination to explain the reasons which lie back of the laws themselves, or to discover a more general law. When new discoveries have confirmed the hypothesis it becomes a theory, and a theory which stands the test of years, and to which exceptions are not found takes its place among the accepted body of scientific truth. Let me illustrate these steps. That carbonic-acid gas consists of 27 per cent. carbon and 73 per cent. oxygen is one of a thousand or more facts which are known to chemists. That any given chemi-

cal compound always contains the same elements in the same proportion by weight is a law whose establishment at the beginning of the present century was attended by a long and spirited controversy. That chemical compounds consist of atoms united to form molecules, and that the atoms unite in the ratio of small numbers is a theory which has stood the test of one hundred years of verification, and which seems likely to become a part of the body of scientific truth.

The intellectual faculties called into exercise in these processes are the powers of observation, of comparison, of inductive reasoning or generalization, and the constructive imagination. The moral qualities which are developed in scientific work are patience in prolonged investigation, perseverance in overcoming obstacles, and openness of mind to the reception of new truth. It is not claimed that these mental and moral qualities are the exclusive possession of scientific men. Such a statement would be absurd. I do claim that any investigation not conducted in the scientific method is of very doubtful value. The dominant motive of the scientific worker is the discovery and utilization of truth. To push out the boundary of human knowledge, to capture some of the territory of the unknown and make it known is his great aim.

Other motives may lead him on, such as desire for fame, for power, or for wealth, but I think it is universally admitted that the joy of discovery of some truth new to the investigator is the greatest connected with his work. The rewards of the scientific worker are: (1) The interest and pleasure of his work; (2) the recognition which he is bound to receive if his work is well done. It is the scientific workers whose discoveries afford the means of improvement of all the material conditions of life. Our modern civilization, with all it includes of material comfort, is a monument to the scientific thought of the age. It is not the rule, however, that the inventor becomes rich, neither does the man of science. Agassiz had no time to make money. Nor should people be impatient with the apparently useless discoveries made by men of science. No doubt many investigations will never bear any so-called practical fruit. Yet many apparently useless facts brought to light in the laboratory have, upon further investigation, yielded practical results.

Why, then, do we advocate science in the schools, and especially in secondary schools?

1. Because the habits of mind which have been described and which are generally characteristic of scientific men are worthy of cultivation, and some of these, notably the power of observation, are cultivated by no study so well as by nature study.

2. The study of nature does or should beget a love of nature, and the love and study of nature becomes a source of perennial happiness to him whose eyes have been trained to see her beauties.

"To him who in the love of nature holds
Communion with her visible forms she speaks
A various language; for his gayer hours
She has a voice of gladness and a smile
And eloquence of beauty, and she glides
Into his darker musings with a mild
And healing sympathy that steals away
Their sharpness ere he is aware."

Any one who has acquired a love of good books and an intelligent interest in some branch of natural history has two never-failing sources of happiness.

3. The study of science and the influence of the scientific method lead to care in making statements and check one of the serious faults of all young writers, viz., the tendency to make sweeping and exaggerated statements. Prof. A. H. Tolman, of the department of English literature in the University of Chicago, in an article on "Natural Science in a Literary Education," says:

"Great forms of thought, mighty molds which of necessity give shape to our thinking, and then to our very imaginings; these come to us from the study of things, not from the study of language. Literature itself must largely find its raw material, its great metaphors and similes, its vivid pictures and mighty symbols within the domain of natural science, and this increasingly as the years go by.

"The chemist's law of definite and multiple proportions; the laws of motion; the phenomena and laws of light, heat, and electricity; the strata, the glaciers, and the process of earth sculpture of the geologist; the winds, tide, and ocean currents; the theories of animal evolution; the struggle for existence; the survival of the fittest; the mighty phenomena, the impressive uniformities, the nebular hypothesis of astronomy—these are great forms of thought as well as facts and theories of science. A man who is unacquainted with modern science cannot well understand the language of educated men, and he cannot interpret sympathetically and adequately the literature of his own day."

4. The study of science develops and strengthens the imagination and the feelings. The person who studies the slow processes of geology and undertakes to find out the age of the earth, or who tries to grasp the distance to the sun as a measuring stick with which to measure the distance to the stars must exercise imagination in the highest degree.

A noted critic said the two men whose imaginations were the most brilliant of any of their day were Michael Faraday and Charles Darwin.

5. Science studies appeal to a certain class of minds which are but little attracted to other branches of study. These studies are the intellectual salvation of some who otherwise might perish by the way.

The Schoolmaster in Old New York.

When Wouter van Twiller arrived in 1633 with the first military garrison for New Amsterdam, he brought also envoys of religion and learning,—Dominie Everardus Bogardus and the first pedagogue, Adam Roelandsen. Master Roelandsen had a school-room assigned to him, and he taught the youthful New Amsterdamites for six years, when he resigned his position, and was banished from the town and went up the river to Rensselaerwyck. I fear he was not a very reputable fellow; "people did not speak well of him"; and he in turn was sued for slander; and some really sad scandals some folk have also made very merry over the fact that were told about him, both in and out of court. And some folk have also made very merry over the fact that he took in washing, which was really one of the best things we know about him, for it was not at all a disreputable nor unmanly calling in those times. It doubtless proved a very satisfactory source of augmentation, of the wavering school-salary, in those days of vast quarterly or semi-annual washings and great *bleeckeryen*, or laundries,—which his probably was, since his bills were paid by the year.

A carpenter, Jan Cornelissen, tired of his tools and trade, left Rensselaerwyck upon hearing of the vacant

NOTE.—This chronicle of the schoolmaster is taken from Mrs. Alice Morse Earle's new book, "Colonial Days in Old New York," by kind permission of the publishers, Charles Scribner's Sons, New York.

teacher's chair in New Amsterdam, went down the river to Manhattan, and in turn taught the school for ten years. Jan was scarcely more reputable than Adam. He lay drunk for a month at a time, and was incorrigibly lazy,—so aggravated Albanians wrote of him. But any one was good enough to teach school. Neither Jan nor Adam was, however, a convicted and banished felon, as were many Virginian schoolmasters.

This drunken schoolmaster was only the first of many. Until this century, the bane of pedagogy in New York was rum. A chorus of colonial schoolmasters could sing, in the words of Goldsmith,—

"Let schoolmasters puzzle their brains
With grammar, and nonsense, and learning;
Good liquor I stoutly maintain
Gives genius a better discerning."

Occasionally a certain schoolmaster would be specified in a school-circular as a sober man; proving by the mentioning the infrequency of the qualification.

As the colony grew, other teachers were needed. Governor Stuyvesant sent to the Classis of Amsterdam for "a pious, well-qualified, and diligent schoolmaster." William Vestens crossed the ocean in answer to this appeal, and taught for five years in one room in New York; while Jan de la Montagne, with an annual salary of two hundred florins, taught at the Harberg—later the Stadt-Huys—and occupied the position of the first public school teacher.

The relations between church, school, and state were equally close throughout all New Netherland. Thus, in 1661, Governor Stuyvesant recommended Charles De Bevoise as schoolmaster for Brooklyn; and when Domine Henricus Selyns left the Brooklyn church, Schoolmaster De Bevoise was ordered to read prayers and sermons, "to read a postille" every Sabbath until another minister was obtained. He was also a "knankebesoecker," or comforter of the sick. Even after the establishment of English rule in the colony, the connection of Dutch church and school was equally close. When Johannis Van Eckellen was engaged by the Consistory of the Dutch church in Flatbush, in October, 1682, as a schoolmaster for the town, it was under this extremely interesting and minute contract, which, translated, reads thus:—

Articles of Agreement made with Johannis Van Eckellen, schoolmaster and clerk of the church of Flatbush:

1st. The school shall begin at eight o'clock in the morning, and go out at eleven o'clock. It shall begin again at one o'clock and end at four o'clock. The bell shall be rung before the school begins.

2nd. When the school opens, one of the children shall read the morning prayer, as it stands in the catechism, and close with the prayer before dinner. In the afternoon it shall begin with prayer after dinner, and close with the evening prayer. The evening school shall begin with the Lord's Prayer, and close by singing a Psalm.

3rd. He shall instruct the children in the common prayers and the questions and answers of the catechism, on Wednesdays and Saturdays, to enable them to say their catechism on Sunday afternoons in the church before the afternoon service, otherwise on the Monday following, at which the schoolmaster shall be present. He shall demean himself patient and friendly toward the children in their instruction, and be active and attentive to their improvement.

4th. He shall be bound to keep his school nine months in succession, from September to June, one year with another, or the like period of time for a year, according to the agree-

ment with his predecessor; he shall, however, keep the school nine months, and always be present himself.

CHURCH SERVICE.

Art. 1st. He shall be chorister of the church, ring the bell three times before service, and read a chapter of the Bible in the church, between the second and third ring of the bell; after the third ringing he shall read the ten commandments and the twelve articles of Faith, and then set the Psalm. In the afternoon, after the third ringing of the bell, he shall read a short chapter, or one of the Psalms of David, as the congregation are assembling. Afterwards he shall again set the Psalm.

Art. 2nd. When the minister shall preach at Brooklyn or New Utrecht, he shall be bound to read twice before the congregation a sermon from the book used for the purpose. The afternoon sermon will be on the catechism of Dr. Vander Hagen, and thus he shall follow the turns of the minister. He shall hear the children recite the questions and answers of the catechism, on that Sunday, and he shall instruct them. When the minister preaches at Flatlands he shall perform the like service.

Art. 3rd. He shall provide a basin of water for the baptisms, for which he shall receive twelve stuivers, in wampum, for every baptism, from the parents or sponsors. He shall furnish bread and wine for the communion, at the charge of the church. He shall furnish the minister, in writing, the names and ages of the children to be baptized, together with the names of the parents and sponsors; he shall also serve as a messenger for the consistories.

Art. 4th. He shall give the funeral invitations, and toll the bells, for which service he shall receive, for persons of fifteen years of age and upwards, twelve guilders; and for persons under fifteen, eight guilders. If he shall invite out of the town, he shall receive three additional guilders for every town; and if he shall cross the river to New York, he shall have four guilders more.

SCHOOL MONEY.

He shall receive for a speller or reader in the day school three guilders for a quarter, and for a writer four guilders.

In the evening schools he shall receive for a speller or reader four guilders for a quarter, and for a writer five guilders.

SALARY.

The remainder of his salary shall be four hundred guilders in wheat, of wampum value, deliverable at Brooklyn Ferry; and for his service from October to May, two hundred and thirty-four guilders in wheat, at the same place, with the dwelling, pasturage, and meadow appertaining to the school to begin the first day of October.

I agree to the above articles, and promise to observe the same to the best of my ability,

Johannis Van Eckellen.

Truly we have through this contract—to any one with any powers of historic imagination—a complete picture of the duties of the schoolmaster of that day.

When the English came in power in 1664, some changes were made in matters of education in New York, but few changes in any of the conditions in Albany. Governor Nicholls, on his first visit up the river, made one significant appointment,—that of an English schoolmaster. This was the Englishman's license to teach:—

"Whereas the teaching of the English Tongue is necessary in this Government; I have, therefore, thought fit to give License to John Shutte to be the English Schoolmaster at Albany: and upon condition that the said John Shutte shall not demand any more wages from each Scholar than is given by the Dutch to their Dutch Schoolmasters. I have further granted to the said John Shutte that hee shall be the only English schoolmaster at Albany."

The last clause of this license seems superfluous; for it is very doubtful whether there was for many years any other English teacher who eagerly sought what was so far from being either an onerous or lucrative position. Many generations of Albany children grew to manhood ere the Dutch schoolmasters found their positions supererogatory.

School Sanitation.

A series of maxims on school sanitation, formulated by a number of German physicians, architects, sanitary engineers, and teachers include the following:

1. **Light.**—The school building should be so situated that the windows of class rooms shall face northeast or west. The windows should be wide and should reach as near the ceiling as possible, and they should not be arched, as this reduces the area of the upper part of the window. The light should come from the left side. Those lessons requiring most severe use of the eyes, as drawing and writing, should be given during the lightest hours of the day. The walls and ceilings of a school-room should be finished in a light color. Direct sunlight must be avoided by the use of curtains, blinds or shades, but artificial light should be used only where it is impossible to give all the lessons in the day time. The electric light is the best artificial light for school-rooms.

2. **Air.**—Each room should be flushed with pure air just before school begins and also during each recess. All windows and doors of the class room should be opened at the close of each recitation, in winter as well as summer. A pavilion should be provided in the school yard, covered with a roof, but open at the sides for the use of pupils in stormy weather. Each recess should be about fifteen minutes' duration, and for lunch twenty minutes should be allowed. Artificial ventilation should be combined with the heating, this being particularly desirable where there is no special system of ventilation. Allowance should be made for about 175 cubic feet of air space for each pupil. The number of pupils in a class should not exceed fifty. In case no provision is made in connection with the heating apparatus for adding moisture to the air, vessels containing water should be placed in the school-rooms.

3. **Removal of Dust and Impurities.**—Overcoats and rubbers should be left outside the school-room. Due regard should be paid to the fact that the smoother the floor, the more easily it is cleaned. All corridor and class room floors should be swept daily and scrubbed with a moist cloth, the desks, tables, and seats always being cleaned after the floor is finished. It is desirable to have the walls cleansed once a week, therefore they should be perfectly smooth and non-absorbent.

4. **Water-Closet Conveniences.**—One seat should be provided for each thirty children. It is desirable to have separate seats for various classes, on account of the varying height required. The maintenance of cleanliness and disinfection should be constantly controlled.

5. **Heating.**—The temperament of the school-room should in winter be from 64° to 66° Fahr. Every room should have a reliable thermometer, if possible, so arranged that it can be read from both school-room and corridor.

6. **School Lunch.**—This should be eaten in a special room set apart for the purpose.

7. **Drinking water** is best obtained from the public supply, but if this is not available a driven well is preferable to a dug or shallow well.

8. **Position of the Body.**—To enable the pupil to set erect it is necessary that the desks be hygienically constructed. They should be made simply, so that they may be easily cleaned. In every class the desks should be of different sizes, and pupils should so far as possible be placed according to their height.

9. **Nearsightedness.**—Children who cannot see the wall maps or read the writing on the blackboard should be given seats in the front row of desks. Blackboards should be a dark, dull black, but should not have a glossy finish. Reading or writing during twilight should be avoided.

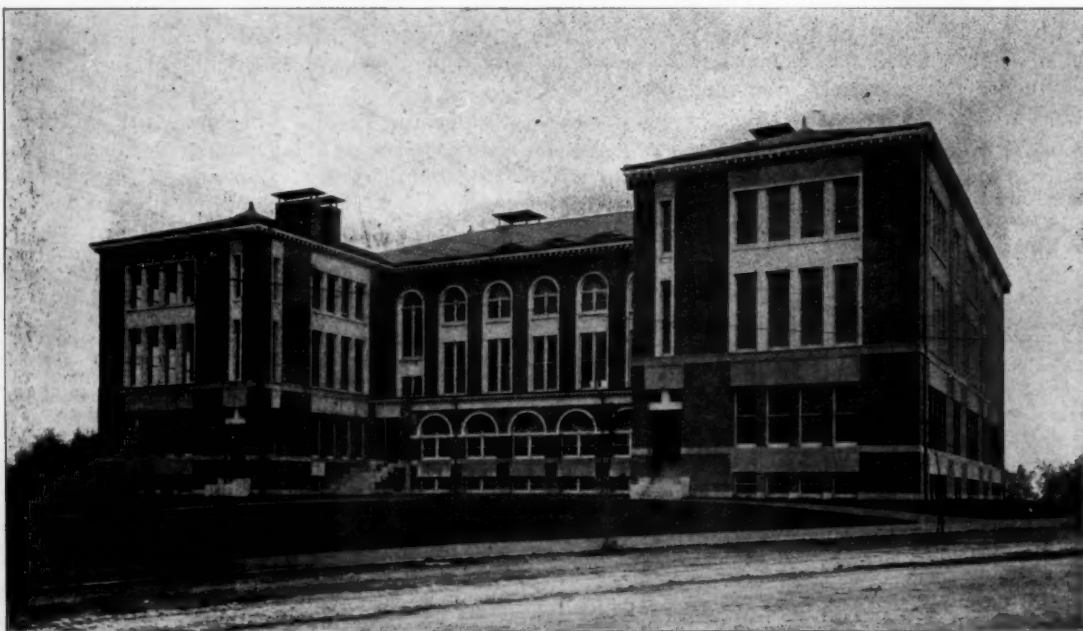
10. **School Baths.**—All schools should be provided with baths,—preferably in the form of rain baths. All children should take these baths as often as once a week unless exempted by special request of parents or by advice of a physician.

11. Each school should be provided with a surgical emergency case containing the necessary articles for rendering the first aid to the injured. Printed directions as to what should be done in case of emergency should be hung up in every school-house.

12. **Division of Time for Pupils.**—The following table may be taken as a basis for arranging the divisions of time of each day for school children of all ages:

Age of Child	Duration of Sleep in Hours.	Time for Dressing, Washing, Undressing, etc.	Time for Meals and Rest after Meals	Time for Play, Sport, Exercise and Voluntary Occupations	Time for Work at Home and School	Sitting Hours in School.		Singing Lessons (weekly)	Gymnastics (Weekly)	Home Work (weekly)	Home Work (daily)
						Weekly	Daily				
7	11	1	3	2-3	12-15	2-3	2-3	1	1	1	1
8	11	1	3	3-4	12-18	2-3	2-3	1	1	1	1
9	11	1	3	4-5	14-20	2-3	2-3	1	1	1	1
10	10-11	1	3	3-4	24	4	4	1	1	1	1
11	10-11	1	3	3-4	24	4	4	1	1	1	1
12	10	1	3	3	27	4-5	4-5	1	1	1	1
13	10	1	3	3	27	4-5	4-5	1	1	1	1
14	9-10	1	3	3	30	5	5	1	1	1	1
15	9	1	3	3	30	5	5	1	1	1	1
16	9	1	3	3	30	5	5	1	1	1	1
17	8-9	1	3	3	30	5	5	1	1	1	1
18	8-9	1	3	3	30	5	5	1	1	1	1

(Saturday being a school day in Germany.)



State Normal School, Salem, Mass. A. P. Beckwith, Principal.

School Equipment.

Under this head are given practical suggestions concerning aids to teaching and arrangement in school libraries, and descriptions of new material for schools and colleges. It is to be understood that all notes of school supplies are inserted for purposes of information only, and no paid advertisements are admitted. School boards, superintendents, and teachers will find many valuable notes from the educational supply market, which will help them to keep up with the advances made in this important field.

Correspondence is invited. Address letters to *Editor of THE SCHOOL JOURNAL*, 61 East 9th Street, New York City.

Electricity in the School Laboratory.

By W. J. Wilcox.

The development of electricity during the past few years and the great increase in the number of uses to which it is put, have naturally had their effect on the curriculum of educational institutions. The quickened enthusiasm of the instructor has been met half way by the deep interest of the student, who, in these times of electric wonders, cannot learn fast enough. Recognizing this great awakening, authors of text-books on physics have promptly revised their first endeavors, or brought entirely new ones; in either case immensely broadening the scope of this particular subject. Dealers in apparatus have also been on the alert, and kept well abreast of the conditions required by the times. The result of all this is, that, while a few years ago a frictional machine and a few other pieces for static electricity, together with a cell for galvanic, were deemed sufficient for illustrating the subject, the laboratory of to-day, in order to do justice to both subject and pupil, should be so equipped as at least to ground firmly the latter in all branches. Such an equipment, judiciously chosen, is by far the cheapest, results considered, of any part of the physical apparatus. To finish the pupil as an expert electrician, there are special laboratories where the array of fine instruments runs up into the thousands; but this article is limited to suggesting a list of such pieces of apparatus as are necessary to give a proper insight into the subject, in that great college of the masses, the high school.

Overshadowing, in a measure, as the branches of voltaic and dynamic electricity have become, static electricity cannot be safely slighted when a thorough understanding of the whole subject is desired. In the first enthusiasm over dynamic, a number of prominent authors relegated static electricity so far to the rear that it was practically lost sight of in their text-books. Fortunately, sober second thought has come to its aid, and the latest and best books give proper prominence to this subject. Therefore a good static machine with its accessories, one or more leyden jars, electrophorus, friction rods, and electroscope, should be found in every laboratory.

So far as voltaic electricity is concerned, it is almost impossible to keep pace with the new cells and batteries that are being put upon the market; nor, in fact, is it necessary, for the majority are simply so many different forms of certain well-known cells. There should, however, be at least a sample jar of the standard cells such as Bunsen's, Daniell's, Grove's, the Gravity, and Grenet. For satisfactory results in connection with measuring instruments, a battery of constant cells, with as high a voltage and low internal resistance as possible, should be at hand. The Edison Lalande, and Partz Acid Gravity cells are good types; and while they may cost somewhat more than an ordinary form, their steadiness and reliability make them a good investment.

Of late, however, the storage battery is rapidly taking the place of all other forms, where a commercial current is available for recharging. With high voltage, low internal resistance and consequently large amperage, and put up in a neat, compact, portable form, the storage battery of to-day is deservedly popular.

Perhaps the most convenient form of cell for general laboratory work, however, and the one most widely used, is the plunge battery of four or more jars, which latter may either be used separately or in any combination, and are readily connected either in series or multiple. A simple but satisfactory mechanism lowers or raises the zincs in the bi-chromate solution. The chief objection to this form as well as all other bichromate batteries, is the rapid falling off of the E. M. F.,

in action. It is always ready for immediate use, however, and, at first, is very powerful.

A good induction coil is the natural companion of a battery; and, in passing, it may be said that there is no easier way of wasting money than by purchasing an inferior coil. Buy of a reliable firm which guarantees its wares, and obtain as large a spark as the appropriation will warrant. The discovery of Prof. Röntgen has created a great demand for coils having a spark of four inches and upward, and they are a good investment, even disregarding the x-ray possibilities. Fine results, however, may be obtained in anything short of x-ray work by much smaller sparks. A primary and secondary coil is also the basis of many important experiments in induced currents, and should certainly be included if the induction coil is not purchased. Apparatus for the electrolysis of liquids and salts should have a place in the laboratory, as the results obtained are both interesting and important.

Telegraphy occupies such a prominent place in this branch of science, that a key and sounder, and if possible a relay, should be counted among the apparatus. In this connection, also, a good electro-magnet should be had. A telephone outfit, or a demonstration telephone, is very useful in illustrating that important means of communication.

Of course, for dynamic electricity, the chief requisites are a good dynamo and a good motor. In some cases these may be had in one piece; but as a general thing they give better results when separate. There is almost a limitless variety of either, but the wise purchaser will invest in the one that will yield the greatest number of experiments, regard, of course, being had to cost. Other things being equal, the simpler and more open the dynamo, the quicker will it appeal to the intelligence of the pupil, as investigation is easier. Good hand power machines may now be obtained, that will illustrate both direct and alternating currents, light 16 candle power incandescent or miniature arc lamps, fuse wire, decompose water, drive motors and induction coils, and, in fact, perform in an experimental way all that its larger prototype does in its broader and more practical field. Motors may be had for from 75 cents upward, and one illustrates the principle as well as another. The main advantage in the larger and more expensive motors is their fineness of construction and consequent smoothness of running, and the increased power obtained, which may be utilized in other ways. As a means of further impressing the important principles, some high schools now present the pupil with all the necessary castings, wire, etc., and require in return a working motor. This is a step in the right direction and is worthy of wide adoption. Such outfits, neatly boxed, ready to put together, may be had of reputable dealers at a very reasonable price. Pupils may also be required to construct their own cells, a tumbler forming the jar, in which are placed sheets of copper and zinc, cut to proper size, obtained of dealers.

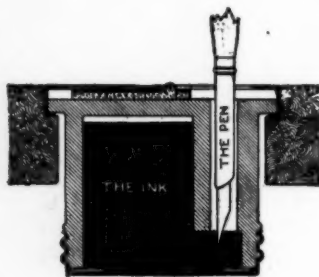
The measurement of the results he is achieving is, however, to the enthusiast, the source of his greatest satisfaction, and this, of course, can be done only by means of test instruments. Unless these are at his command, the student has stopped on the threshold. Very fortunately for the great majority of measurements, few pieces are absolutely necessary—a galvanometer, a rheostat or resistance box, and a bridge. Care must be exercised, however, that these instruments shall be absolutely reliable and accurate, whether they are of the simpler sort or the more expensive kind; for it takes but little variation to render null the most important experiment; and a student who is continually finding his results at variance with what they ought to be, is apt to lose confidence in himself, his instruments, and the study. Too much stress, therefore, cannot be laid on requiring accuracy. If possible both a tangent and an astatic galvanometer should be had; while the plug resistance box seems to give the best results. Of late years the Wheatstone slide-wire bridge appears to be the most convenient form for general laboratory use. A generous supply of wire, and plenty of binding posts never come amiss in the laboratory, which should also contain bar, horse-shoe, and breaking magnets, soft iron bars to magnetize, magnetic needles and compasses.

The articles suggested in the foregoing, will be found to be sufficient for about all the work laid out in the best high

school text-books, and form a nucleus around which may be gathered, from time to time, more expensive and elaborate pieces. Buy of the most responsible concerns; their wares may cost a little more in the beginning, but the satisfaction of using instruments known to be reliable more than repays the excess in price.

The Pneumatic Ink-Well

One of the essentials of school equipment is a good ink-well. This need is met by the pneumatic ink-well. Among its good points are the following: It is economical, because it saves 90 per cent. of the ink from evaporating. It is clean; that is, it does not gather dust. It is noiseless, flush with the top of the desk, and needs filling only once a term.



Pneumatic Ink-Well.

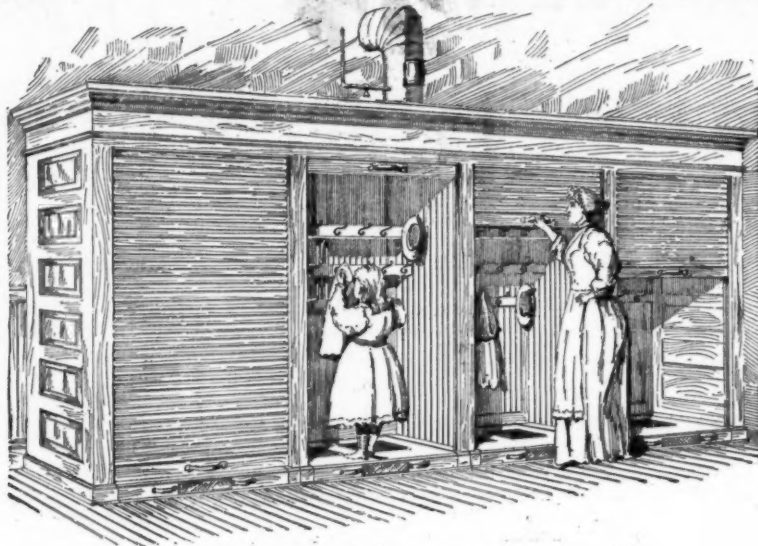
A bulb-filler is used to fill the ink-well, as well as to empty it. The bottom need not be removed oftener than once a year, when the well requires a thorough cleaning. The filler is furnished with all orders at a nominal price.

For further information, address Messrs. Potter & Putnam, 63 Fifth avenue, New York.

Wilson's Hygienic Wardrobe.

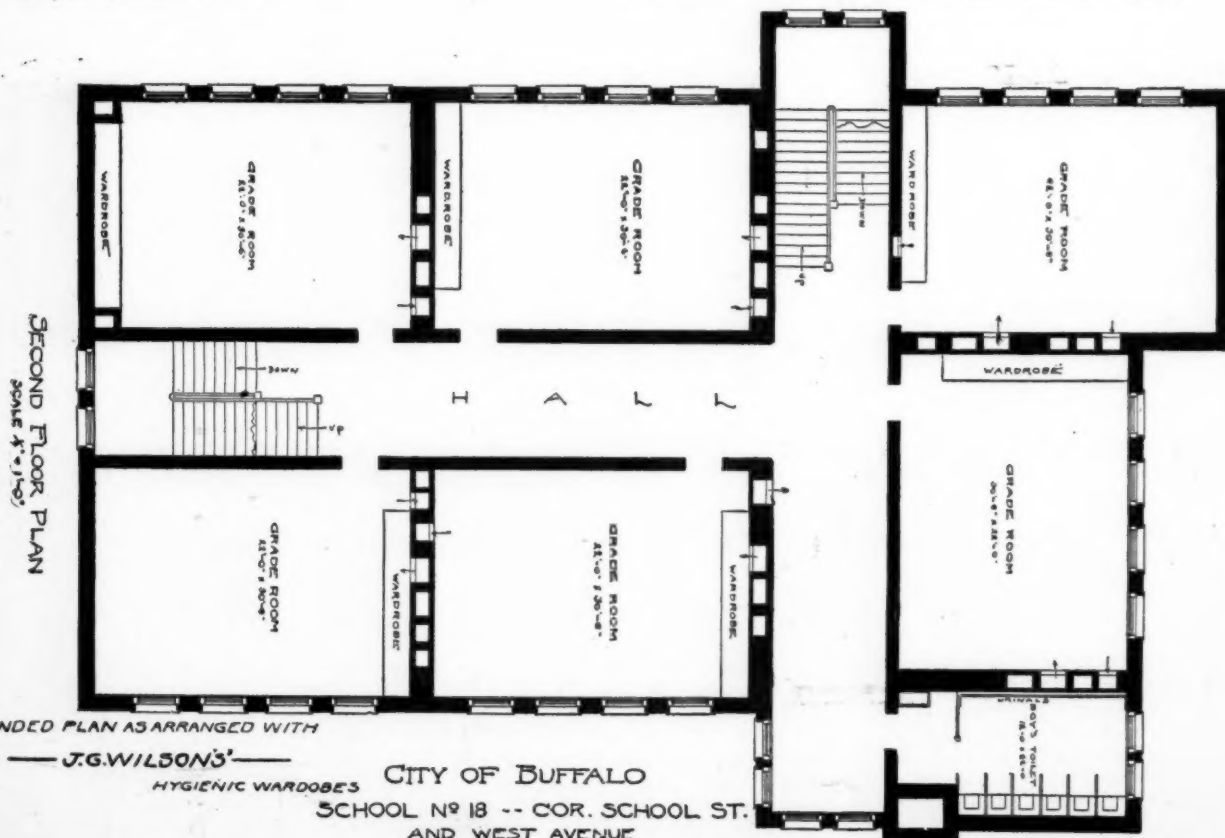
The introduction of the ventilated wardrobe is an important feature in the hygienic equipment of schools, as well as a saving in expense. The arrangement of clothing shown in cut No. 1 will be found, with slight modification, in the majority of modern school buildings. While the plan requires more floor space than is necessary, it possesses no advantages which can offset this objection.

Plan No. 2 was designed as an alternative to No. 1, with a view to reducing the cost of the building. The area of the entire floor space is 330 square feet less than No. 1, and yet all the rooms are 2' 6" wider. Wilson's hygienic wardrobes are placed within the room, and a strong current of air passes



Wilson's Hygienic School Wardrobes, Style 1.

through them continuously. The air is taken from the room and drawn into the flue, thus purifying the clothing, and drying it if damp. Once having entered the wardrobe, the air cannot return to the room. The particular building which has been taken as an example has three stories, the arrangement of rooms being the same on each floor. It contains



AMENDED PLAN AS ARRANGED WITH

J.G. WILSON'S

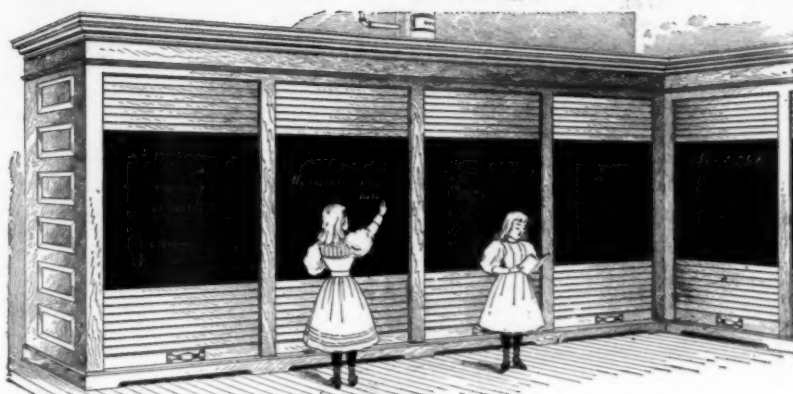
HYGIENIC WARDROBES

CITY OF BUFFALO

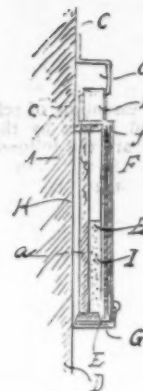
SCHOOL NO. 18 -- COR. SCHOOL ST. AND WEST AVENUE

PLAN NO. 2.

AUG. C. EISENWEIN ARCHT.



Wilson's Hygienic Wardrobe, Style 3.—School wardrobe fitted with Wilson's Rolling Blackboard Shutters (surface coated with silicate.)



Sand Board invented by Lillian M. Elliot. Fig. 1. Side View—Board closed. (See Fig. 2 on following page.)

50,400 cubic feet less than the building originally planned, and will cost, after purchasing the hygienic wardrobes, \$3,500 less. In other words, every room in the building has been increased in area by about 55 square feet.

The hygienic wardrobe is furnished combined with blackboards. The wardrobe is air-tight when the rolling doors are closed, except for the openings at the bottom when air is admitted, and the ventilating pipe above, through which the air in the wardrobe is drawn in the flue. The portion of the rolling door prepared for a blackboard is absolutely smooth and even, and the black silicate preparation makes an excellent blackboard.

For those who prefer them the wardrobes are made with vertical rolling doors. It must be borne in mind, however, that these doors, when rolled sideways, necessarily reduce the capacity of the wardrobe.

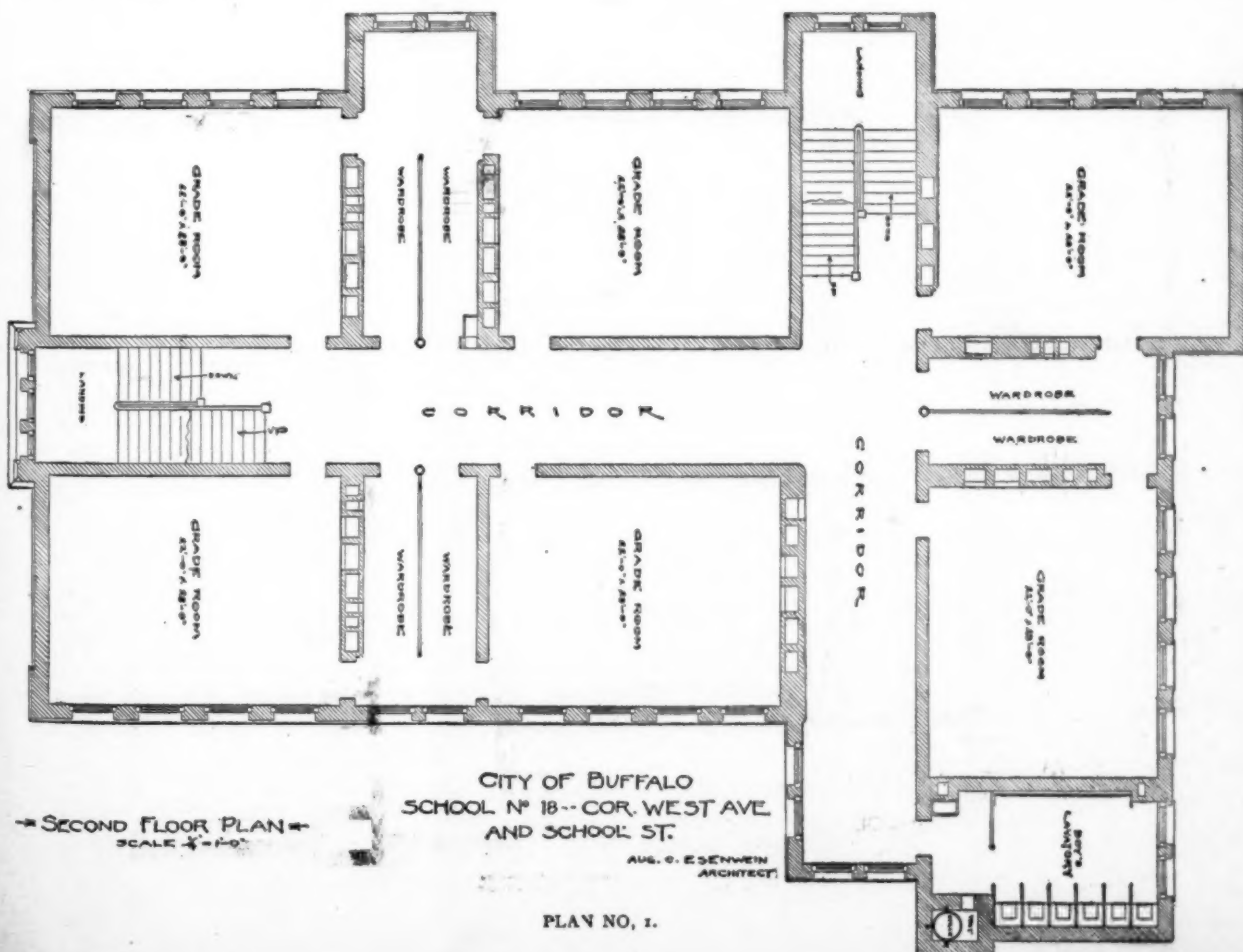
Another variety of ventilating wardrobe is fitted with rolling doors to roll above or at the side. These are fitted with wire backs and wire panels at side or front when desired. In other respects the equipment is the same as in the hygienic wardrobe. For particulars, address manufacturer, James G. Wilson, 74 West 23rd street, New York.

An Improved Geographical Device.

There was a time within the memory of man when the term "geography" referred almost entirely to the political portion of that science. Latterly the educational world has awakened to the importance of this subject in the school curriculum and it has consequently ceased to be simply a memory test.

The French lay great stress upon the child's political, historical, and physical knowledge of his native land. The Germans, after much thought, have made geography the central subject from which all others radiate. Many noted American writers have not been behind in urging that it be given its proper place in the school program.

All writers agree that the first step is to arouse the child's interest. This cannot be done by the aid of maps alone. Every teacher has experienced the difficulty in eradicating from the child's mind the erroneous impression that north is up and south is down.



Recognizing this stumbling block in the way of the child's obtaining a clear concept of the matter taught, these writers have recourse to the sand-board, not only for teaching the physical features, and the outline of the continents, but also for teaching intelligently the home-geography, and to illustrate the surroundings described in poems.

At a recent exhibition of the kindergarten work in the Normal college the "Village Blacksmith" was illustrated on a sand board.

Beginning at the kindergarten, the sand-board is of the greatest use in lessening a teacher's work through primary and even into some of the grammar grades.

In the history class it can be used to show the line of explorations, and the movements of an army can also be marked out and impressed on a class in a manner not possible by any mere memorizing method.

A very serviceable sand-board for class-room use has been invented by Miss Lillian Elliot, teacher in New York grammar school.

The board, for which a patent has been applied, is 2 ft. \times 3½ ft., just a nice working size. It is coated inside with blue bath enamel so that water or the dampness of the sand will not hurt it and it is made so carefully from selected wood

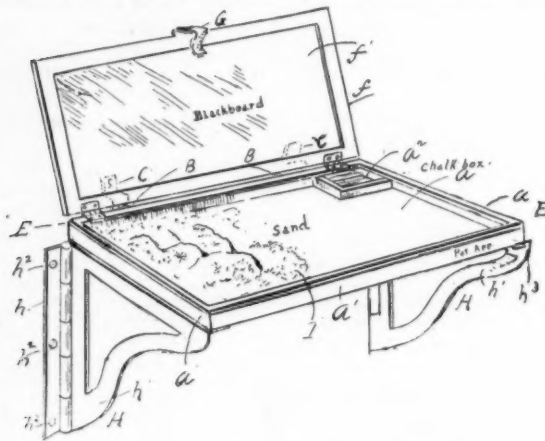


Fig. 2

that it cannot warp. The cover, which closes down and fits dust-tight, is made in panels of natural cherry or ash highly varnished. The inner side of the cover consists of a large blackboard, which will be found very useful in making sketches by which to illustrate the sand work. In one corner of the tray there is a little box to hold the chalk. In another corner there is a little trap with a cover. Through this the sand may be removed whenever desired. Should it be found more convenient to keep the sand in the sand-board, the cover may be closed and the sand left there ready for use at any moment.

The board inclines toward the class at an angle of 20° to enable the children to see the work done on it by teacher or pupils. The board is supported by swinging brackets which fold in and allow the board to drop parallel to the wall when not in use. When closed it requires only four inches of valuable space.

Should the class-room be plentifully supplied with blackboards, as, fortunately most class-rooms are, the sand-board can be obtained without blackboard cover at somewhat less expense.

Already most encouraging testimonials have been received from various quarters and offers have been received to place the boards on sale in England, Germany, France, Belgium, Switzerland, Canada, and South America.

Dr. Hunter, president of the New York city normal college, has ordered them for the method department of the college and in the training school.

Dr. Edgar Dubs Shimer, formerly a professor in the New York university and now one of the superintendents of the New York board of education, has done much in the way of both help and encouragement toward making this a success.

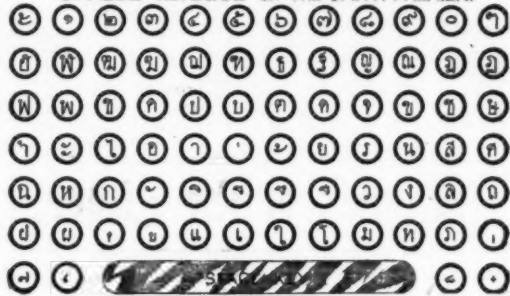
The board is also highly recommended by Dr. Jenny B. Merrill, supervisor of kindergartens for New York city. These are only a few of the highly valuable testimonials that have been received.

For further information, readers of *The School Journal* may apply to the inventor, Miss Lillian M. Elliot, 65 East 95th street, or E. L. Kellogg & Co., 61 East 9th street, New York city.

A Siamese Typewriter.

Siam is a country of which the average American knows little, but the coming visit of its king and queen to the United States will cause attention to be directed to that very interesting peninsula of Farther India. Some time ago the Prince of Siam was sent to this country to have made a number of typewriters fitted with Siamese letters. The Smith Premier Typewriter Company was selected to build the machines, the work being superintended by the secretary. As there are no capitals in the Siamese language no distinction can be made between upper and lower case. The use

SIAMESE KEYBOARD ON THE SMITH PREMIER.



of the accents made several small changes necessary, for these all have to be on dead keys, that is, keys so arranged that the accent may first be printed and then the letter, without having to move the carriage back. These points were thoroughly explained by the secretary of the Prince, and the result was a machine so perfect that it has not been changed in any particular.

The Juvenile Statesmen Series.

To the "Nature Readers," "Legends of the Red Children," and "Old-Time Stories," the Werner Co. has added new and unique studies in primary history. The firm has designed and put into execution a series of historic, biographic, and patriotic text-books, of which "The Story of Our Country" is the beginning. The latter, by Alma Holman Burton, is a history of the United States from the discovery of the continent down to the present day. The narrative is so monosyllabic that a child of the fourth grade may easily understand it, but so absorbing in its interest that a student in the eighth grade reads it with delight.

This little history, so well received by the public, is a groundwork upon which the biographical booklets have been built. These are supplementary school readers, answering the purpose of a review, and, at the same time, furnishing additional research in the important epochs of history. They are the Children's Statesmen Series. Their mission is to hold up high ideals before the future law-makers of our country. It is well to read how Perseus slew the dragon with Medusa's head. But it is better to read how Washington vanquished tyranny with the sword of a just cause. It is well to read of Cadmus giving letters to a new city. But it is better to read of Franklin spreading the love of literature and science to a new republic. It is well to read of Lycurgus coining the iron money for the Spartans. But it is better to read of Hamilton stamping the eagle on the metals of the Americans. It is well to read of Hercules, wandering through Hyrcanian forests, while he slew the monsters in his path. But it is better to read of Jackson striding through Cumberland Gap to the wilds of Tennessee. It is well to read of Theseus treading the labyrinths to free the youths and maidens from the Minotaur. But it is better to read of Grant marching through the wilderness to strike the shackles from four million slaves.

The Werner School Book Company has secured the best talent to write these ideal volumes. James Baldwin, the prince of juvenile story tellers, has furnished four masterpieces on George Washington, Benjamin Franklin, Daniel Webster, and Abraham Lincoln. In addition, the author of "The Story of Our Country" is to take from history the names of Patrick Henry, Alexander Hamilton, Andrew Jackson, and Ulysses S. Grant, and make them live again more intimately in the mind of young America. "The Story of Our Country," and the Werner booklets, which, from the pens of James Baldwin and Alma Holman Burton, so beautifully continue its patriotic theme, will be eagerly read wherever the flag floats over a school-house.

"Allow me to extend my heartiest congratulations on your souvenir number of *The School Journal*. In text, illustrations, and entire make-up, it truly deserves to be characterized as superior and superb.

"It is a pleasure for me to add that the tenor of your regular weekly issues is, in its way, quite worthy to be mentioned in connection with these special numbers." B. P. Snow.

Principal, North Yarmouth Academy, Yarmouth, Me.

"*The School Journal* is, as its name indicates, devoted to educational interests, and it has its places of being both in New York and Chicago. One cannot look over this journal without pity for the teacher who is not a subscriber."

From "The Herald," Syracuse, N. Y., March 27.

The Taber Art Company, of New Bedford, has filed its annual statement of its condition. It shows assets of \$358,857.85, divided as follows: Machinery, tools, plates, negatives, etc., \$163,716.80; cash and debts receivable, \$70,924.47; manufactures, merchandise, material and stock in process, \$120,968.69; miscellaneous, \$3,247.89. The liabilities are: Capital stock, \$300,000; debts, \$50,527.07; profits and loss, \$8,330.78; total, \$358,857.85. The house is about to consolidate with that of L. Prang.

Topics of the Times.

Japan has filed a formal protest to the proposed treaty for the annexation of Hawaii. It is claimed that the rights of Japan in Hawaii are ignored in the proposed treaty and her claims repudiated. The friends of the treaty declare that Japan's protest will make the ratification of the treaty certain.

Queen Victoria's jubilee celebration ended with the grand naval review in which one hundred and sixty-six war ships, making a line twenty-five miles long, took part. It was the grandest naval review ever known; the white U. S. cruiser Brooklyn, was one of the most admired of the vessels. Indeed, the whole celebration quite eclipsed any that has ever been held. It is estimated that the cost was \$23,000,000.

The first general census ever taken under the auspices of the Russian government in one day was taken on Feb. 9, and is now verified, and the results are published. The total population of the Russian empire is given as 129,211,113, indicating an increase of about 16,000,000 over the estimates made in 1886. This is divided as follows: European Russia, 94,188,750; Poland, 9,442,590; Caucasia, 9,723,553; Siberia and Saghalien, 5,731,732; the Steppe region, including the provinces just north and east of the Sea of Aral, 3,415,174; Turkestan, the Trans-Caspian region, and the Pamirs, 4,175,111; Finland, 2,527,801. There are also enumerated 6,412 Russian settlers and subjects in Bokhara and Khiva.

There are nineteen towns having over 100,000 inhabitants; St. Petersburg, with its suburbs, 1,267,023; Moscow, 988,610; Warsaw, 614,752; Odessa, 404,651; Tiflis, 159,862; Tashkend, 156,506; Baku, 112,253.

The victory of Turkey over Greece seems to have roused the fanaticism of the whole Mohammedan world. It is reported from Persia that the Jews in that country have been given the choice of conversion to the Moslem faith or extermination. Many outrages have already been committed on the Hebrew population.

A recent government report shows that the trade of the United States with Cuba was \$47,548,610 in 1896, as compared with \$102,864,204, in 1893. Returns for the current year show only \$14,926,817; at this rate the trade for 1897 will hardly reach \$20,000,000. Some people are using these figures as an argument for interference by the United States in the war.

Dr. Klemm, the author of "European Schools," has written a paper at the suggestion of the Bureau of Education on "Training of Teachers in Germany, Austria, and Switzerland." Dr. Klemm thinks that upon the degree of culture of the teacher depends that of the young, and to a great extent that of the entire people. While there are great facilities for obtaining knowledge after the school age has passed, yet there is a certain discipline to be gained in school which the life outside can never give. He quotes from Diesterweg the observation that "Wherever a school degenerates it does so because of its teachers; wherever a school advances it is by means of better teachers. There is no other way."

Cambridge, Mass.—Miss Helen Keller has spent the last year at a private school in Cambridge preparing to enter Radcliffe college. At the coming entrance examination, she will present herself for nine hours of work. The examinations will be read to her and she will write the answers upon a typewriter.

LETTERS



Freedom in Promotion.

Supt. Wm. J. Shearer, in the "Atlantic Monthly," details what he seems to consider a new system for the promotion of pupils below the high school, the system being based on the theory of individualization.

It is patent to advanced educators that the weakest point in the graded school work is its lack of cognizance of the individual; and any plan that will give one more opportunity for the free development of the God-given powers of the individual will be hailed with delight by such educators.

For twenty years in Kansas City all the freedom in promotion, of which Mr. Shearer speaks, has been enjoyed by the principals and teachers of the ward schools; and not only allowed, but emphatically encouraged by the department of superintendence. In this city the ward school work is comprised in a seven years' course, each year's course being divided into three terms; the classes of the three terms of each year's work being lettered, "C," "B," and "A" respectively. Thus as a basic condition, the respective classes in a school of medium size are but twelve weeks apart. Under such conditions pupils of marked ability may be, and are, promoted at any time, without examination, "on trial," and they are seldom returned to the grade from which promoted. Promotions may, also, be made at the close of each term, without examination. It being justly considered that a teacher should be able to select, from her class, the pupils who are able to do the work of the next class above. It is strength, mental ability, that is looked for; not merely the catalogue of facts that the pupil has compiled.

As an inevitable condition, the larger the school, the closer the grading; thus, schools slightly advanced above the medium in size divide each term's work into two classes; these classes being but six weeks apart; while in the largest schools each term's work is divided into three or four classes, being respectively four, or three weeks apart. As a result of such close classification, it is possible, at any time, to promote any pupil who shows himself even slightly in advance of, or mentally stronger than the remainder of his class, to the next class in advance, without detriment to himself or to the class he enters; and to the benefit of the class from which he is taken, as it leaves them more closely graded.

Any teacher, at any time, is authorized, by and with the consent of the principal, to make such "special promotions;" and in this way strong pupils gain several terms' work during the course, while the weaker ones also gain by the change.

This possibility of closer grading in the larger schools is a pointer worthy the consideration of school boards; to the end that such close grading may be attained, if not in the erection of large schools, at least by a system of grouping of small schools, so that each in the group shall be a "feeder" for the one ranking next above it, throughout the group, to the highest in rank.

As a matter of economy, also, such a grouping of small schools under one supervising principal, is worthy the attention of boards of education.

The vital point, however, for educators and school officers, is to see that no class of pupils shall be leveled off to one intellectual height by the monstrous grade sword.

Central High School, Kansas City Mo.

G. T. Johnson,

The School Journal.

NEW YORK & CHICAGO.

WEEK ENDING JULY 3, 1897.

Teachers in many of our larger cities and towns complain because superintendents and boards of education leave so little responsibility to them. The course of study is laid out down to the very number of pages of each text-book to be taught during the term, syllabi and printed directions specify exactly how each subject shall be taught. Whose fault is it? Must all the blame be given to superintendents and boards, or is there some lack on the part of the teachers? When teachers have become expert in matters relating to the education of children they will be given more freedom in methods of work and their wishes will be respected; until then, those who have given study and thought to educational problems will arrange such plans as are certain to be helpful to the child.

The teacher who does not know the mineral products of Central Asia or the names of the inventors of the various fog signals can find the information in the nearest cyclopedia. No one person can carry in mind all the details that might be asked in an examination, nor is it necessary that this should be done. The questions most important in teachers' examinations ought to be those that will bring out the candidate's object in taking up school work. Let them be asked: What is your purpose in teaching? How would you work for the accomplishment of this purpose? The answers will give the examiners a clearer insight into the qualifications of the candidates than many hundreds of data coaxed out of memory's hampers and rubbish heaps.

With the beginning of better times there will be a revival of interest in the private schools. Nearly ten thousand of these institutions are to be found in this country. It is a field of ceaseless competition, in which only those can hope to win who are fully acquainted with the educational demands of the times and the best ways and means of meeting them. *The School Journal* is proud of the steady growth of its popularity among the principals of these schools, and the cordial endorsements its work has received from many of them.

A Valuable Lantern Offered as a Prize.

The School Journal wishes to remind its readers of the prize that was offered in the February number for the most practical article on "The Use of the Stereopticon in Teaching," the prize to consist of the "Normal School" lantern, made by J. B. Colt & Co., New York city.

The lantern is sold for \$100; it is a perfect projector, and can be used both for pictorial illustration and for simple experiments with comparatively few adjustments. It has the best quality of condensers and condensing lenses, and there is an incandescent electric attachment. If preferred, acetylene gas can be used, with burner and hood, in place of the electricity.

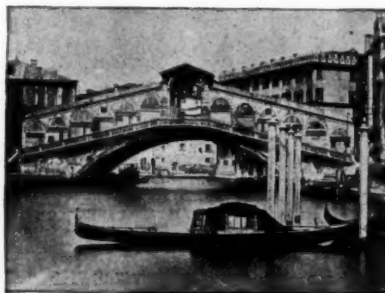
As it is desired that competitors give a clear and concise treatment of the use of the stereopticon in teaching, the length of the article is limited to 2,000 words. Any articles not securing the prize that may be helpful to the end desired, will be published in *The Journal* at regular contributors' rates. All manuscript should be sent to the editor of *The School Journal*, 61 East 9th street, New York, on or before Aug 1, 1897.

Editorial Letter.

Venice.

The railroad from Florence to Venice rises steadily until it crosses the Apennines, then descends into the fertile valley of the Po which is twenty feet above the splendid farms covered with luxuriant wheat, rye, grass, hemp, and corn. Bologna is the only town of note; here we changed cars. At Florence the doors from the waiting room were kept shut until the last moment, so as to wring all the money possible from travelers. This is done as follows: you tire of waiting or you fear you may not get a seat, and so pay a franc to the official to let you go through a side door to the train. The roads here are run by the government. There are people in America who want their railroads controlled in the same manner; if they want to see things in the railroad business not done half as well as in America let them travel in Italy.

I selected a pension in Venice not in the main city, but on an adjacent island; it is in an old palace, still in the possession of one of the family who built it two hundred years ago. Through the center of the first floor runs a wide hall; the side rooms must be used for storage. On the second floor is a wide hall or sala corresponding to the one below, with high ceilings, 18 or 19 feet; in this small tables are set for guests. The stairs by which you ascend are marble. But everywhere you see that decay has set in; the palaces on this island and those in Venice are getting shabbier every year. To use our American phrase, Venice is becoming a "back number."



Venice.—The Rialto.

Courtesy of Thomas Cook & Sons.

Venice was a great power 700 years ago; in 1204, she conquered Constantinople, and by her fleets and armies made herself the mistress of the Morea; she had at her zenith period three hundred sea-going vessels; the city was the focus of the commerce of Europe; the manufactures that came from Persia, India, Egypt, etc., entered Europe mainly through Venice. But the Turks took Constantinople in 1453 and thus controlled the Morea; then the Portuguese discovered how to get to India and China by going around Africa, and so the commercial business—the only kind of business the Venetians understood—was gone; England and Holland no longer depended on Venice for silk, coffee, tea, spices.

The union of the various states to form the kingdom of Italy was a good thing for Milan, Genoa, Naples, Florence, and especially Rome, but not for Venice. The only manufactures here are those of lace and Venetian glass—both luxuries for the latter there is little demand; the former is manufactured by women exclusively at their homes and cannot bring in much money, though I suppose 5,000 are engaged in it; many of these live in the islands adjoining Venice. Then, again, everything is done by hand; there is not a horse in the city; if a barrel of flour is sent you by the R. R. it is not carried by a dray to your house from the station; two of more men will get it into a boat; in fact, a half dozen men will try to help; some hold the boat, etc., then two men will row the boat to your house; where thee or four will join to help unload. Of course the transportation and work would be cheap, but man cannot compete with steam and horse power and that is what the Venetians are trying to do.

If the people would lay out two streets at least; fill up some of the useless and narrow canals; get in horses, possibly electric railroads; put the lace-work on a better basis, build

a bridge to the main land, so that wagons and carriages could bring the food, etc., turn more places into boarding-houses and advertise cheap rates for tourists and travelers, a beginning of better days would be made. Things are really serious in a city where there are more than 30,000 paupers because they have nothing to do. Of course the schools are in poor condition; in Florence and Rome the common people read the newspapers extensively, but not so here; the apathy comes from their not knowing where to get the next meal.

The city is built on 117 islands; there are 150 canals and 378 bridges. The Grand Canal starts at the railroad station and is like a reversed S, with St. Mark's at the further end. On this, little steamboats ply back and forth at frequent intervals. Land has been too precious to put into parks and squares, or as they call them here, plazas; that of San Marco being the only one; it is about 600 feet long and 250 feet wide, and is paved with marble mainly, and is surrounded with shops except on the east side where a church is built called St. Mark's because what were claimed to be the apostle's bones were brought from Alexandria in 1828.

Venice was once grand, that is plain enough; when she was great she spent money on buildings and art. It must have been a costly thing to build here, as everything has to be transported by water; the marble, stones, bricks, mortar, and the food needed, all came from a distance. We now talk much of the importance of pure drinking water, but the Venetians simply dug down eight or ten feet into the mud of which the islands are composed and all hands, the rich Doge and the poor laborer, quenched their thirst with what they hauled up. They now have water brought from a distance.

Had it not been for its artists Venice would attract little attention, in spite of its gondolas, which are indeed a novelty, and after once tried, a nuisance. Venetian art is as different from that of Florence and Rome as can be imagined. I just said that Venice was once the mistress of the east end of the Mediterranean, she owned almost what the Turk now has. Her art shows this; it is oriental; St. Mark's is in the Byzantine style: decoration and color were used without limitation. The buildings are not so large as in Florence and Rome, but they are far more richly decorated. The sculpture in Venice is limited to the tombs put up in churches; in the church of San Giovanni and Paulo there are two equestrian statues, the first I have seen in a church; in this city the Doges are buried.

In painting, the Venetians certainly took a high rank; many of their best works are scattered about in galleries in Europe; Bellini, Giorgione, Palma, Tiziano Vecellio, J. Tintoretto, Paul Veronese, are the names of some of an army of great men who used color as no others seemed able to do. Mr. Ruskin advises a careful study here of Bellini, Tintoretto and Veronese. Speaking of Ruskin, it seems to me that Venice owes him a monument; it is certain that very many come to Venice imbued with enthusiasm from reading his "Stones of Venice." I went specially across the city to see an equestrian statue of Bart. Coleoni, general of the republic (d. 1475) which stands beside the church of San Giovanni and Paulo, because Ruskin had said there was not a more glorious work of sculpture in the world than this. I felt that he had not overpraised it.

I must not attempt to do more than note a few things. In front of St. Mark's and high up are four horses in gilded bronze, made in Nero's time, sent to Constantinople by Constantine, brought from Venice by Doge Dandolo in 1204 when he conquered the city, carried by Napoleon to Paris in 1797 and brought back here in 1815. Inside, the ceiling of the church is rich in mosaics; remember, the colors are produced by different pieces of marble. All through the church are precious things, for instance the stone on which John the Baptist was beheaded. Now some would doubt this being the very stone, but the permanency of things in these countries is a part of its civilization; in America it is difficult to find points where great events were transacted; but not so in this old land. So when the sacristan shows me four pillars behind the high altar and tells me they came from Solomon's temple I by no means think it improbable.

A. M. K.

Cost of City High Schools.

Milwaukee, Wis.—An investigation by the school board, of the expense to the city of each high school pupil as compared with that incurred in other cities, showed that in Philadelphia the cost was \$64.09; in Rochester \$32.70. In the former city the cost was greatest, in the latter the least, while Milwaukee is about half way between, the expense per pupil being \$50.15. The differences are largely in the matter of salaries. In Philadelphia principals are paid from \$3,000 to \$4,000 a year, teachers in the boys' schools from \$800 to \$2,500, in the girls' schools from \$800 to \$1,600. In St. Louis, the maximum for principals is \$3,000, assistant principals \$2,200 and for assistants from \$1,500 to \$2,000.

Class Work Exhibit in Denver.

Denver, Col.—An exhibition of class work as performed by the pupils of the several grades from kindergarten through the high school was given during three consecutive days beginning June 11. It included exhibits from the manual training high school, of drawings, modeling, carving, and work done in the wood and forging departments. Each exhibit, from the stick laying in the kindergarten to the pen and ink sketch in the high school section, manifested that the purpose intended was the gain in power rather than the simple art of learning how the work should be done.

Reduction of the Number in Marks.

Newark, N. J.—At a recent meeting of the school principals, presided over by Supt. Gilbert, the subject of marking was discussed. Several principals favored the reduction of the number of marks from five to three. Supt. Gilbert considered this a step in the direction of proper marking for he thought that there should be two marks only, one showing that the child was ready for promotion, the other that he was not.

Kindergarten Supervisor of Brooklyn.

Brooklyn, N. Y.—Miss Fanniebell Curtis, of the state normal school, New Britain, Conn., has been appointed supervisor of the kindergartens to be established in this city in September. Miss Curtis studied kindergarten with Miss Mingins at New Britain, Conn., where on the completion of her course she was made assistant kindergarten. She was later called to Willimantic, to take charge of the kindergartens in the state normal school, and there she remained for three years. Later she went to New York for a year for advanced work in pedagogy and the history of education. She was then called to Newton, Mass., leaving there to accept her late position in New Britain. Miss Curtis comes to Brooklyn with an excellent reputation as an organizer, and great things are expected of the new kindergarten system to be started under her supervision.

The Rod Will not Be Spared.

Indianapolis, Ind.—At a recent meeting of the school board a resolution introduced at a former meeting, providing for the abolition of corporal punishment in the schools, was called up. While many of the commissioners were in favor of the resolution as a matter of principle, it was thought to be unwise to adopt it just now, when many children will be brought into the schools by the compulsory school law.

The vote was ten to one against the resolution.

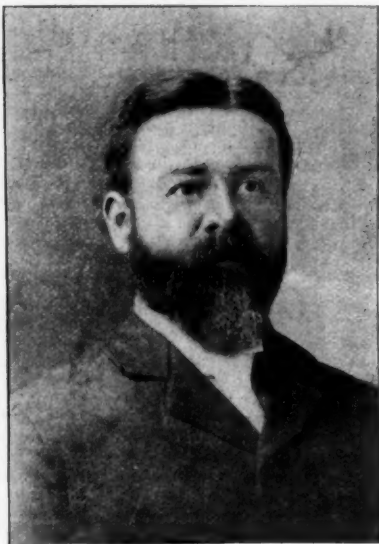
The Boys Must Stay Right There.

The new truant school, at 215 East 21st street, opened with eighteen pupils, but at the last report there were thirty-three enrolled. Mr. William W. Locke, supervisor of the truancy department of the board of education, is acting as superintendent, and Miss Julia Byrne has been assigned to the new school from grammar school No. 53. The pupils will never be allowed to leave the school building, except on Sunday, and then only by special favor, as a reward for unusually good behavior.

School Celebration at Irvington.

The twenty-fifth anniversary of the public school of Irvington-on-Hudson in the present building and under Union Free School act, was celebrated recently. Many of the former principals, teachers, and members of boards of education were present and took part in the exercises, after the children's program had been completed. Principals Sherwood, Barhite, and Atwood, who had formerly served in the school, were warmly welcomed, as was Mrs. Kemble who had taught in the district for about thirty years. Mr. Jared Barhite had written a poem for the occasion, which was read as a part of the program.

Champaign, Ill.—The legislature has passed a bill holding the state responsible for the amount of the endowment fund of the state university, amounting to about \$450,000, regardless of whether this sum is ever recovered from the wreck made by the late treasurer, C. W. Spalding, or not. Appropriations to the amount of \$80,000 have also been made for increasing the faculty of the university.



DR. JAMES LEE,

Assistant Superintendent, New York City, who was elected president of the New York State Teachers' Association, on July 1.

Brief Notes of Real Interest.

Detroit, Mich.—A plan has been suggested in this city for a summer term of school. In those districts where the children are in the streets all day the good accomplished during the school is almost entirely lost during the summer months. A session of about six weeks is contemplated, school to be kept in the morning only, the work to be done consisting of manual training with a little reading and English. A sufficient number of teachers have volunteered their services to carry the work through the summer, but at least \$500 will be needed to defray the expenses of the manual training, taking trips into the country, etc. It is probable that the board will allow the use of the school buildings, if the plans are carried out.

An Englishman has declared concerning the refusal of Cambridge university to give degrees to women that though Cambridge may remain a gentlemen's university, it has proved itself not a university of gentlemen. The New York "Tribune" makes a pertinent suggestion in regard to this when it says: "The Cambridge non placet may have brought a blessing in disguise if they lead Englishwomen from knocking at the doors of masculine institutions to the upbuilding of a great English university for women."

Lowell, Mass.—Christopher P. Brooks, director of the Lowell Textile school, has received, from the commissioner of education of the interior department, an appointment as special representative of the U. S. Bureau of Education to the International Congress of Technical Instruction at London.

The old building of school No. 1, Jersey City, is to be torn down. A new structure to cost \$125,000 will be erected in its place. The school was built in 1847 and cost \$9,000. Mr. George H. Linsley has, except for a short interval, always been its principal. A re-union of the pupils of the old school was held in the building last Wednesday evening to bid it farewell and to greet their old teachers, Mr. Linsley and Mrs. Eliza J. Eveland, who was his first assistant, now primary principal of school No. 2. Senator Wm. B. Daly, of Hoboken, delivered the address. More than 800 were present.

The Teachers' Retirement fund of New Jersey received a large addition from the proceeds of the grand concert given in the Jersey City Tabernacle on the evening of June third. Many of the city's wealthiest and most cultured ladies were among the patronesses, and though the night was stormy, the large audience room was crowded. The concert was under the direction of Mr. C. Judson Bushnell, assisted by the celebrated "Bradford Trio," Miss Maude Morgan, Miss Zetti Kennedy, and Dr. Henry C. Hanchett.

The proposition has been made, and is said to be gaining in favor, to have the chapters of school histories relating to the civil war compiled under the supervision of men representing both those acquainted with the conflict on the Northern side and those who fought in the Confederacy.

Miss Susan P. Pollock, of Washington, well-known as a kindergarten lecturer, will, as usual, conduct a summer normal course at the Mountain Lake Park Chautauqua, in Mary-

land. She is at present making an extensive tour by invitation from various friends.

Mr. D. A. Preston, of Mt. Vernon, N. Y., has been recently appointed principal of grammar school 103, Brooklyn. Mr. Preston was born in Chenango county, in 1861. He began his study in the district school, and was later graduated from a village academy. He has passed the examination for life certificates in New York state, and he holds a state life certificate in New Jersey and the principal's "A" life certificate in Brooklyn. Mr. Preston's first position after he had taken up teaching as his life work was at Ripley, N. Y., with a salary of \$600 a year. He has risen by his own efforts, from a district school position with a salary of \$20 per month, to the principalship of a city grammar school, at a salary of \$3,000 a year. Mr. Preston plans soon to go abroad to make a more careful study of German pedagogy.

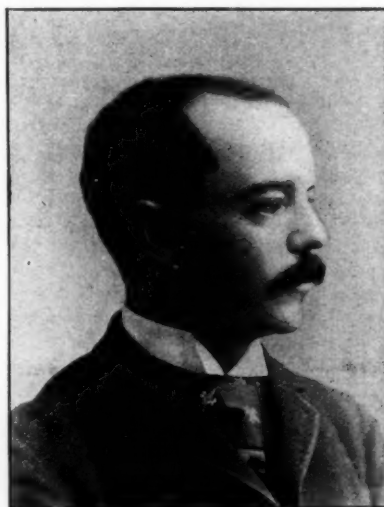
Province of New Brunswick.—The report of the chief superintendent of education shows that the proportion of first-class teachers is gradually increasing. The number of untrained teachers employed in 1895-6 was only 21.

The larger number of school-houses recently built is proof of educational progress. The superintendent calls attention to the need of pictures and other school-room decoration, and suggests that the legislature make a small annual appropriation for suitable charts, pictures, etc., to be distributed under the direction of the educational department. An increased interest has been shown in school libraries; 1,100 volumes having been purchased in 15 districts, at a cost of \$580.08.

The superintendent of education recommends the trial of the system of consolidation by districts, which has been tried in several states of the United States. A considerable saving of funds might be effected, by uniting two or more districts, and transporting to the school at public expense children who live beyond walking distance of the school.

The New York State Teachers' Association met in New York city June 30, the meetings continuing for three days.

The following were elected officers for the next year: President, Dr. James Lee, assistant superintendent of schools, New York city; vice-presidents: W. J. O'Shea, principal of grammar school No. 75; Arthur L. Goodrich, Utica; Mary E. Tate, female department No. 45, New York; Mary E. Long, Oswego. Executive committee: Charles N. Cobb, Albany; George Griffiths, Utica. Secretary, Schuyler B. Herron, Elizabethtown; assistant secretary, W. L. Callahan; treasurer, E. McKee Smith; transportation agent, Arthur C. Cooper; superintendent of exhibits, E. C. Colby, Rochester.

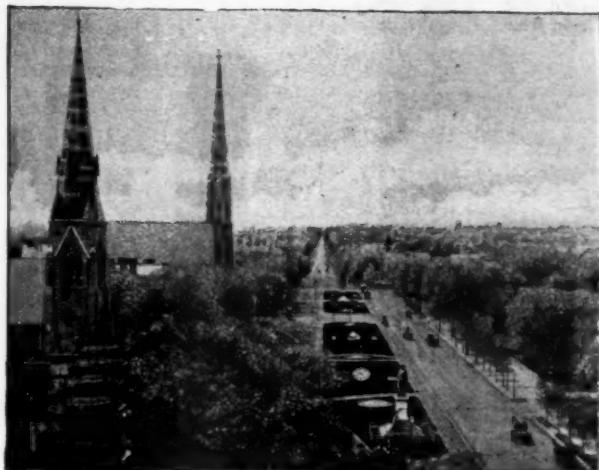


PRIN. WILLIAM J. O'SHEA,

G. S. 25, New York City, elected First Vice President of the New York State Teachers' Association, July 1.

Hoboken, N. J.—Prof. De Folson Wood, of the Stevens Institute of Technology, died June 27, of diabetes. He was a graduate of the Rensselaer Polytechnic Institute at Troy, and had been professor of civil engineering at the University of Michigan, where he remained for fifteen years. From there he was called to the chair of mathematics at the Stevens Institute, later was transferred to the chair of mechanical engineering.

Miss Juliet Corson, who has probably done more toward systematizing plain cookery than any other American woman, died in New York, June 18. Her best known books are "Meals for the Million," "Family Living on \$500 a Year," "Sanitary Living," and "American Cookery."



View West on Grand Ave. from 8th St., Milwaukee.

N. E. A. Notes.

At the meeting at headquarters of the natural science department of the N. E. A., to be called at Milwaukee, July 8, a committee of five will be appointed to discuss the following subjects:

1. Preferred year of preparatory course.
2. Preliminary to what studies. Subsequent to what studies. General relation to other studies.
3. Outlines of work for one year, or two years, or three years' course.
4. Outlines for one year's work, varied to suit the particular year of the course.
5. Scope and method of work such that it may count as one, or two, or three years in college entrance requirements.
6. Should the courses in natural science be the same for all students, whether they are prospective candidates for college or not.
7. Text-books. Reference books.
8. Note-books; how used, and how accepted.
9. Laboratory work preliminary to, parallel with, or subsequent to, lectures and recitations.
10. Recommendations for standard minimum courses in quantity and quality of work.
11. Any other important and associated problems such as those suggested by the well-known report of "The Committee of Ten."

The committees already appointed are selected from the New England Association of Colleges and Preparatory Schools, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the North Central Association of Colleges and Secondary Schools, the Southern Association of Colleges and, and the American Association for the Advancement of Science.

Department of Kindergarten Instruction.

WEDNESDAY, JULY 7, 2.30, P. M.

Child Study.

1. Greeting from the Froebel Union and response by the president.
2. Music: -Lullaby, Miss Ethel Vergin.
3. "The Kindergarten and Child Study," Dr. John Dewey, University of Chicago.
4. "Has the Child Study Movement any Help for the Kindergarten?" Miss Bertha Payne, Hull house, Chicago.
5. "Froebel's Use of Child Study," Miss Geraldine O'Grady, (Philadelphia normal school.
6. Music: Kinder-Symphony, Froebel Union.
7. "Methods of Child Study in the Kindergarten," Dr. Jenny B. Merrill, kindergarten supervisor, New York public schools.
8. Discussion.—Led by Mrs. A. H. Putnam, Chicago, Froebel Association.
9. Business.—Appointment of committees.

THURSDAY, JULY 8, 2.30 P. M.

The Kindergarten in the Public Schools.

1. Music.—Violin solo.
2. "The Place of the Kindergarten in the Public Schools," Supt. C. B. Gilbert, Newark, N. J.
3. "Kindergarten Work and Principles in the School," Miss Katherine Beebe, Evanston, Ill.
4. Music.—"Tailor Song," Froebel Union.
5. "Ideals to be Realized by the Kindergarten Supervisor," Miss Mary C. McCulloch, kindergarten supervisor, St. Louis public schools.
6. Reports of the International Kindergarten Union.
7. Business.—Reports of committees; election of officers.

Books.

American History told by Contemporaries is a proposed set of four volumes in which great events of our country are told in the language of writers of the time. The first volume that has just been published bears the title of "Era of Colonization, 1492-1689," edited by Albert Bushnell Hart, of Harvard. The work is an attempt to put within convenient reach of schools, libraries, and scholars authoritative texts of rare or quaint writings in American history, contexts of rare and quaint writings in American history, contemporary with the events which they describe, and to give in a succession of scenes, a notion of the movement and connection of the history of America, so that from this work by itself may be had an impression of the forces which have shaped our history, and the problems upon which they have worked. Pains have been taken to use the first authoritative edition of each work in English, and a faithful translation of pieces in foreign languages. (The Macmillan Co., New York. \$2.00 a volume; \$7.00 for the set.)

The series of Colonial monographs, unique in its make-up and production, and original in its inception, intended to present terse but authoritative sketches of some of the most interesting, important, and decisive events which led up to the foundation of the American republic, is introduced by "The Voyage of the Mayflower," penned and pictured by Blanche McManus. The story of the Mayflower has often been given by able writers, but this is the first time the picturesque element has been presented. The text and illustrations (which are on every page) are adapted to each other, and the combination is very pleasing. The work in both shows that the author has made a thorough and sympathetic study of the grim and earnest founders of New England. The book is a square 12mo., with beautifully designed cover, silver top, and uncut edges. (E. H. Herrick & Co., 70 Fifth avenue, N. Y. \$1.25.)

If the young people of the rising generation are not familiar with the history of the United States it will not be the fault of the writers of school histories. In strong contrast to the histories of two or three decades ago, every pains is made to make them attractive. The method of historical study has changed and with it have come books that are brighter, more attractive, more thought-provoking. The latest of these is "A History of the United States of America," by Horace E. Scudder. The reputation of the author as a writer for the young would lead one to expect a book of extraordinary merit, and we think this volume will not disappoint this expectation. One who examines it will observe the simplicity, the directness, and the logical sequence of the narrative with few dates to clog the memory; most of those that are necessary are placed in the margin. So thoroughly interesting is the matter made by the author's way of presenting it that the book does not seem like a school history. The numerous questions, however, show that it is intended to be studied; that he wishes to show, or have the pupils find out for themselves, the why and wherefore of events. The narrative is brought up to June, 1897. The text is illustrated with many maps, portraits, and other illustrations. (Sheldon & Co., Chicago.)

A thorough revision of that standard work Shaw's "New History of English and American Literature," has been made by Dr. Truman J. Backus, president of Packer Collegiate Institute, Brooklyn, N. Y. The object of Dr. Backus, in this revision, has been: 1. To keep in view the correlation between the history and the literature of the English people. The history of the literature has been divided into periods corresponding to distinct periods in the history of England. 2. To present in orderly array the work of American authors, and to give it such full discussion as shall awaken in American students appreciation for the literary achievements of their countrymen. 3. To furnish such references for collateral readings as may be helpful to the teacher in directing the reading of the students. 4. To furnish supplementary lists of authors not discussed in the book, giving authentic dates, and naming the chief work, or the kind of work, done by each author. There is a very complete index, with cross references, facilitating the use of the book, and a new and beautiful map of Britain at the close of the sixteenth century is furnished. The biographies are terse and accurate and the criticisms marked by their moderation and fairness. Altogether it is a most valuable book. (Sheldon & Co., New York and Chicago. \$1.25.)

Physical science is difficult, and perhaps the most difficult portion of it—electricity—is the part that is getting to be the most important. How shall the young pupil be made to understand what is meant by volts, and amperes, and ohms? "Scholar's A B C of Electricity," by Wm. H. Meadowcroft makes the strange terms of the science plain by comparing them with familiar things. It is intended for use in schools of grammar grade. (American Technical Book Co., 45 Vesey street, N. Y.)

DIRECTORY OF

TEXT-BOOKS

FOR SCHOOLS AND COLLEGES.

The following list of school and college text-books most largely in use in the United States, has been prepared for the convenience of superintendents, principals, and school officials. From time to time special lists of books will be taken up in THE JOURNAL and reviewed as has been done with Vertical Writing and School Music Systems. **ABBREVIATIONS.**—When a firm has several branches always address the nearest branch. Mention THE SCHOOL JOURNAL when writing.

A. & B., Allyn & Bacon, Boston
A. B. Co., American Book Co., New York, Cincinnati
Chicago, Boston, Phila., Atlanta, Portland, Ore.
A. & S., Armstrong & Son, New York
A. S. B. & Co., A. S. Barnes & Co., New York
Appleton, D. Appleton & Co., New York & Chicago
W. L. B. & Co., W. L. Bell & Co., Kansas City, Mo.
D. C. H. & Co., D. C. Heath & Co., Boston, N. Y., Chi.
E. & W., Edgar & Sons, New York
H. B. & Co., E. H. Butler & Co., Philadelphia
W. B. C., W. B. Clive, New York
E. & Bro., Eldredge & Bro., Philadelphia
Flanagan, A. Flanagan, Chicago
F. & W. Co., Funk & Wagnall Co., New York
F. V. I., Frank V. Irish, Columbus, Ohio
Ginn, Ginn & Company, Boston, N. Y. & Chicago
H. M. & Co., Houghton, Mifflin & Co., Boston, New York & Chicago

H. & N., Hinds & Noble, New York
Harper, Harper & Bros., New York
H. H. & Co., Henry Holt & Co., New York
W. H. J., W. R. Jenkins, New York
L. S. & S., Leach, Shewell & Sanborn, Boston and New York
L. & S., Lee & Shepard School Book Co., Boston
J. H. L. Co., J. B. Lippincott Co., Philadelphia
L. G. & Co., Longmans, Green & Co., New York and London
Lowell, A. Lowell & Co., New York
Macmillan, Macmillan Co., New York and Chicago
R. L. M., R. L. Myers Co., Harrisburg, Pa.
Morse Co., The Morse Co., New York
M. B. & Co., Milton, Bradley & Co., Springfield, Mass.
M. M. & Co., Maynard, Merrill & Co., New York
D. McK., David McKay, Philadelphia
Pitman, Isaac Pitman & Sons, New York

P. & P., Potter & Putnam, New York
P. T. B. Co., Practical Text-Book Co., Cleveland, O.
Prang, Prang Educational Co., Boston, New York and Chicago
C. S. Co., Christopher Sower Co., Philadelphia
S. F. & Co., Scott, Foresman & Co., Chicago
Scribner, Chas. Scribner's Sons, New York
Sheldon, Sheldon & Co., New York
S. B. & Co., Silver, Burdett & Gosh, Boston, New York, Chicago, and Philadelphia
T. H. & Co., Thompson, Brown & Co., Boston
F. P. Co., University Publishing Co., New York, Boston, and New Orleans
Werner, Werner School Book Co., Chicago, New York and Boston
W. P. House, Western Publishing House, Chicago
W. & R., Williams & Rogers, Rochester, N. Y.
Wiley, Jno. Wiley's Sons, New York

Algebras.	Mercantile	Dictationaries.	Hackley's Trig.	A. S. B. & Co.	U. S. History.	
Milne's (4), A. B. C.	Complete, P. T. B. Co.	Author's (2), Harper	Wells' Geom. (3), L. S. & S.	Barnes' (2), A. B. C.		
Senen's (4), " "	Mayhew's Books (3), S. B. & Co.	Antiquities of the Greek, " "	Nichol's Geom. (4), " "	Eclectic (2), " "		
McNie's Equations, A. S. B. & Co.	" " " " " " " " " "	Barthol's Latin, " "	Bartol's " " " " " " " " " "	Eggleston's (2), " "		
Thomson's, M. M. & Co.	Powers' First Lessons, O. M. P.	Lewis' " " " " " " " " " "	Chauvenet's Geom., J. B. L. Co.	Bunier's, " "		
Venable's (3), U. P. Co.	Botany.	Liddell & Scott's Gr-Eng. (3), " "	Potter's Geom. (3), J. E. P. & Co.	Swinton's (2), " "		
Sanford's, " "	Appar's Plant Analysis, A. B. C.	Smith's Eng. Latin, " "	Hill's Geom. (3), Ginn & Co.	White's, " "		
Giffin's, " "	Dana's Plants and Their Chil-	Jannari's Modern Greek, " "	Wentworth's Geom. (2), " "	Anderson's (5), M. M. & Co.		
Wells' (4), " "	Gray's (5), " "	Harper's Classical, " "	Wentworth's Geom. & Trig., " "	Ellis', " "		
McCurdy's, " "	Wood's (5), " "	Everybody's Dict., U. P. Co.	Brooks' Geom., C. Sower Co.	MacCoun's, S. B. & Co.		
Ferrin's, J. B. L. Co.	Nature Calendar, Morse Co.	Worcester's (5), J. B. L. Co.	" " " " " " " " " "	Morris', J. B. L. Co.		
Hull's, E. H. B. & Co.	Bergen Plants, Ginn & Co.	Heath's Ger-Eng., D. C. H. & Co.	Bowser's P. & S. Geom., L. C. H. & Co.	Montgomery's (2), Ginn & Co.		
Wilson's, C. Sower Co.	Newell (4), " "	Anglo Sax. Dict., A. S. B. & Co.	Hunt's " " " " " " " " " "	Sheldon's (2), D. C. H. & Co.		
Brooks', E. & Bro.	Macbride's, Allyn & Bacon	Davis & Peck, Math.	Edwards' " " " " " " " " " "	Dodge's, L. S. & S.		
Taylor's, A. S. B. & Co.	Nelson's, D. C. H. & Co.	Constaneau Fr-Eng., L. G. & Co.	Smith's Trig., " "	Flake's, H. M. & Co.		
Bowser's (2), D. C. H. & Co.	Spaulding's, H. H. & Co.	Smith's Classical, Appleton	Hall & Knight Trig., " "	Barnes' Popular, A. S. B. & Co.		
Hall & Knight's Elem. (2), Macm.	Freeland, L. G. & Co.	Spier's Surenne's Fr-Eng., " "	Lock's Trig. (3), " "	Channing's, Macm.		
Smith's Stringham, " "	Bradbury & Emery's T. B. & Co.	Adler's Ger-Eng., " "	Bradbury's Geom. (2), T. B. & Co.	Higginson's, L. G. & Co.		
Freeland, L. G. & Co.	Bradbury & Emery's B. G. N. & Co.	Bellow's Fr-Eng., H. H. & Co.	Pettee's Plane Geom., S. B. & Co.	Armstrong's Primer of A. & S. Co.		
Bradbury & Emery's B. G. N. & Co.	Benedict's, A. S. B. & Co.	Gasc's, " " " " " " " " " "	Newcomb's Geom., H. H. & Co.	Johnston's, Scribner		
Benedict's, A. S. B. & Co.	Charts.	Standard, Funk & Wagnall	Welsh's Geom., Griggs	Am. Hist. Leaflets, " "		
Newcomb's C'G'e, H. H. & Co.	Tooke's Reading, W. & R.	Webster's, G. & C. Merriam	Oiney's Geom., Sheldon	Hansell's (2), U. P. Co.		
Collins', S. F. & Co.	Macdon's Hist. (37), S. B. & Co.	Webster's School, A. B. C.	" " " " " " " " " "	Andrew's, Scribner		
Sheldon's (2), " "	Reading Charts, " "	Tauchnitz's French, Scribner	Venable's Geom. & Trig., U. P. Co.	Mowry's, S. B. & Co.		
Oiney's (4), " "	Normal Music (3), " "	" " " " " " " " " "	Phillips-Loomis Loga-	English Histories.		
Boyden's, S. B. & Co.	Butler's Reading, E. H. Butler	" " " " " " " " " "	Phillips-Loomis Ele. of	Lancaster's, A. B. C.		
Lilly's (2), " "	Monroe's, " "	" " " " " " " " " "	Geom. & Calculus, " "	Thalheimer's, " "		
Arithmetics.	Reading.	Drawing.	Normal Course (9), S. B. & Co.	Green's, Harper		
Appleton's, A. B. C.	Script Reading, P. & F.	Normal Course (10), P. & F.	Complete Course (10), P. & F.	Merrill's, M. M. & Co.		
Bailey's, " "	Excelsior Map, " "	Primary (2), " "	Complete Course (10), P. & F.	Montgomery's, Ginn & Co.		
Dubb's Mental, " "	Vertical Script Reading, " "	Shorter (2), " "	Phillips-Loomis Loga-	Guest's Hand-book, Macm.		
Ficklin's, " "	Whiting's Music, (2) D. C. H. & Co.	Whit's New Course (6), L. C. H. & Co.	Phillips-Loomis Ele. of	Gardner's, L. G. & Co.		
Harper's (2), " "	Dunstonian Writing, T. B. & Co.	Anthony's Tech. (2), D. C. H. & Co.	Geom., " "	Higginson & Channing's, " "		
Kirk & Sabina's (2), " "	Complete School Chart, F. P. Co.	Thompson's (5), " "	Phillips-Loomis Plane	Longmans' Summary, " "		
Milne's (2), " "	Bell's Kansas Port., W. L. B. & Co.	Chapman's (2), A. S. B. & Co.	Geom., " "	Short History, " "		
Ray's (5), " "	Bell's Com. Sch. Ch., " "	Graphic (7), " "	Appleton's (2), A. B. C.	Montague's Constal, " "		
Robinson's (7), " "	Merrill's Vertical Penmanship, " "	Holmes' New Ser. (3), C. M. B. Co.	B. rnes', " "	Creighton's Epochs, T. B. & Co.		
White's (3), " "	Mil's Phys., M. M. & Co.	" "	Eclectic (2), " "	Armstrong's Primer of A. & S. Co.		
New Practical, P. T. B. Co.	Whitcomb's Hist'l A. S. B. & Co.	Economics.	Harper's (2), " "	Gardner's, H. H. & Co.		
Thomson's (4), M. T. B. Co.	Chemistry.	Andrews', S. B. & Co.	Long's, " "	Mowle's, L. S. & S.		
Venable's (3), U. P. Co.	Appleton's (5), S. B. & Co.	Descriptive Eco., W. & R.	Smith's (2), " "	Wilder's Hand Book, Harper		
Sanford's (4), " "	Cooley's (3), " "	English Classics.	Smith's (2), " "	Hallam's, " "		
McHenry & Davidson's, Werner	Kaiser's Laboratory Work, A. B. C.	Eclectic (3), A. B. C.	Maury's (2), U. P. Co.	Hame's, " "		
Werner Mental, " "	Steele's-Popular, " "	Royle's (2), Harper	Tilden's (2), L. S. & S.	Smith's, " "		
Raub's (2), Lovell	Steele's-Scholar, El.	Royle's Shakespeare, " "	Potter's (4), J. E. P. & Co.	Kummer's Epitome, A. S. B. & Co.		
Hobbs', L. S. & S.	Burnett's Inorganic (2), S. B. Co.	Royle's Select Eng. (6), " "	Butler's (4), E. H. B. & Co.	General History.		
Southworth's, " "	Mead's, " "	Swinton's, " "	Warren's (5), " "	Barnes' Hist. of Wild, A. B. C.		
Greenleaf's (3), " "	Greene's, J. B. L. Co.	Student's Series (25), L. S. & S.	Mitchell's (4), " "	Swinton's Outlines, " "		
Normal Course (2), S. B. & Co.	Warner's Elements, " "	Baldwin's (5), " "	Stille's Series, P. & F.	Fisher's, " "		
Prince's (3), Ginn & Co.	William's (2), Ginn & Co.	Bradley's, " "	Houston's Physical, E. & Bro.	Labberton's, S. B. & Co.		
Wentworth's (4), " "	reer's, Allyn & Bacon	Boyd's (7), A. S. B. & Co.	Tarr's Physical, Macm.	Andrew's, Ginn & Co.		
Wentworth & Hill (2), " "	Benton's, D. C. H. & Co.	Eng. Classics (34), " "	Longmans', L. G. & Co.	Freeman's, H. H. & Co.		
Hull's (2), E. H. B. & Co.	Shepard's Inorganic, " "	Eng. Classics (21), L. G. & Co.	Werner's, " "	Anderson's, M. M. & Co.		
Brooks' (7), C. Sower Co.	Richardson's-Prin. of, Macm.	Maynard's Series, (184), " "	Dreyspring's (4), A. B. C.	Ploetz' Universal, H. M. & Co.		
Brooks' Union (3), " "	Hopkins'-Physics, L. G. & Co.	Royle's Poetry, (11) H. M. & Co.	Eclectic (6), " "	Epochs of Mod. Hist., Scribner		
Hall's (2), " "	Cooke's (2), Appleton	Riverside Lit. Series, (110) " "	Keller's, " "	Roman History.		
New Business, C. M. P.	Roscoe & Schorlemmer (3), " "	Modern Classics, (34) " "	Vandermissen's, " "	Barnes' Brief History, A. B. C.		
Practical, " "	Remsen's (3), H. H. & Co.	Masterpieces of British Lit., " "	Wormman's (4), " "	Creighton's, " "		
Complete Accountant, " "	Roscoe & Lunt Inor., Macm.	Academy Series, Allyn & Bacon	Maynard's Ger. Texts (18), M. M. & Co.	Thalheimer's, " "		
Business Arith., W. & R.	Houston's (3), E. & Bro.	Sprague's (6), S. B. & Co.	Gems of Literature, Morse Co.	Bury's, Harper		
Mental, " "	Civics, Sociology.	Treasured Thoughts, F. V. I.	Schm. l's German, J. B. L. Co.	Leighton's, M. M. & Co.		
Atwood's (2), D. C. H. & Co.	Andrew's Man. of Const., A. B. C.	Etiymology & Orthog-	Ginn's German (12), Ginn & Co.	Trask's Ref. Hand-book, L. & S.		
Walsh's (2), " "	McClary's St. in Civ., A. B. C.	raphy.	Brand's Reader, Allyn & Bacon	Crittwell-Literature, Scribner		
White's (2), " "	Peterman's Civil Gov., " "	Irish Orthography & Orthoepry, F. V. I.	Harris (2), D. C. H. & Co.	Gibbon's, Harper		
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Texas School Agency, Marshall, Tex.		Typewriters.		Magee Furnace Co., " U. S. Heater Co., Detroit, Mich	
Coyriere, Mrs. N. Y. C.		Am. Writing Mach. Co., N. Y.		Smith & Anthony Co., " Hyatt & Smith Mfg. Co., " "	
Flak Teachers' Agencies, Boston, New York, Chicago Toronto, Los Angeles		Wyckoff, Seamans & Benedict, " "		Sturtevant Co., B. F. " Detroit Heat. & Vent. Co., " "	
Hazen, Irving, Met. Tea. Bu. N. Y. C.		Densmore Typewriter Co., " "		Palsey, J. F. " E. M. Link, Machine Co., Erie, Pa.	
N. Y. Educational Bureau, " "		Hammond Typewriter Co., " "		Buffalo Forge Co., Buffalo, N. Y.	
Schermerhorn Co., J. W. " "		Yost Typewriter Co., " "		Stover Heater Co., Freeport, Ill.	
Young-Fulton, Mrs. M. J. " "		Typeewriter Exchange, " "		Herenden Mfg. Co., Geneva, N. Y.	
Interstate Teachers' Agency, Saginaw, Mich.		Smith Premier Co., Syracuse, N. Y.		Fuller & Warren Warm. & Ven. Co., Chicago.	
Harden, C. W., Syracuse, N. Y.		Daugherty Typewriting Co., " "		American Boiler Co., " "	
Robertson, I., Memphis, Tenn.		Williams Type Co., N. Y. City		Boynton Furnace Co., " "	
Educational Ex. Providence, R. I.		Ford Type Co., " "		Fuller & Warren Co., " "	
Central Ed. Bureau, Phila. Pa.		Heating & Ventilating		Gorton & Lidgerwood " "	
Parker, C. J., Raleigh, N. C.		Am. Boiler Co., Boston		Hart & Crouse, " "	
Southern Teachers' Exchange, Nashville, Tenn.		Boston Blower Co., " "		J. L. Mott Iron Works, " "	
		Exeter Machine Works, " "		Standard Radiator Co., " "	
		Gurney Heater Mfg. Co., " "		Peck & Williamson Co. Cincinnati O.	
		Ideal Boiler Co., " "		Hersey Atwood Heater Co., " "	
		American Warm. & Vent. Co. Chic.		Roberts Machine Co. Collegeville, Pa.	
				Craig Reynolds Foun. Co., Dayton, O.	
				Werner Furnace Co., " "	
				Raymond Campbell Mfg. Co., " "	
				Mowry, W. C., " "	
				H. Sandmyer & Co., " "	
				L. A. Sheppard & Co., " "	
				Howard Furnace Co., " "	
				Pease Furn. Co., J. F. Syracuse, N. Y.	
				Ranton Boiler Co., " "	
				Carlton Furnace Co., " "	
				Giblin & Co., " "	
				Kernan Furnace Co., " "	
				Russell Wheeler & Co., " "	
				Broomell, Schmidt & Co., York, Pa.	

New Text-Books for Two Months.

This list is limited to the books that have been published during the preceding month. The publishers of these books will send descriptive circulars free on request or any book prepaid at prices named. Special attention is given to all such requests which mention THE SCHOOL JOURNAL. For Pedagogical Books, Teachers' Aids, School Library, and other publications, see other numbers of THE JOURNAL.

AUTHOR.	TITLE.	PP.	BINDING.	PRICE.	PUBLISHER.
Aubert, E.	Litterature Francaise	200	Cloth	1.00	H. Holt & Co.
Avery, Elroy M.	Elementary Physics	317	"	.60	Sheldon & Co.
Avery, Elroy M. & Sinnot Chas. P.	First Lesson in Physical Science	160	"		
Bailey, W. Whitman	New England Wild Flowers	150	"	.75	Preston & Rounds.
Baldwin, James	Four Great Americans	246	"		Werner School Book Co.
Belfield, Henry H. (Ed.)	Lord Chesterfield's Letters	159	"	4.00	Maynard, Merrill & Co.
Bass, E. W.	Differential Calculus	389	"		J. Wiley & Sons.
Bonne, Borden P.	Theory of Thought and Knowledge	355	"		Harper & Brothers.
Bryant, Wm. Cullen (Tr.)	The Iliad of Homer	84	Paper	.30	Houghton, Mifflin & Co.
Clark, Victor S.	Eutropi Historia Romana	165	Cloth	.50	Leach, Shewell & Sanborn.
Deane, Chas. W.	The Phonetic Reader	110	Paper		The Morse Company.
Dryer, Chas. Redway	Studies in Indiana Geography	90	B'ds		Inland Publishing Co.
Finch, Adelaide V.	The Finch Primer	494	"	1.00	Ginn & Co.
Freytag, Gustav	Die Journalisten	170	Cloth	.70	American Book Co.
Gibson, J. W.	A School History of the U. S.	90	"	.70	A. Flanagan.
Goodrich, Frank (Ed.)	Goethe's Gotz von Berlichingen	228	"	1.50	H. Holt & Co.
Grandcourt, C. H.	Italian Composition	197	"		D. C. Heath & Co.
Helm, G.	The Principles of Mathematical Chemistry	13	"	2.25	J. Wiley & Sons.
Johnson, Samuel	Alexander Pope	348	"	.60	Harper & Brothers.
Johnston, Harold W.	Latin Manuscripts	208	Leather	.65	Foresman & Co.
Kirk, Ella Boyce	Dickens' Story of Oliver Twist	186	Cloth	.45	D. Appleton & Co.
Malory, Sir T.	Le Morte d' Arthur	136	"		The Macmillan Co.
Maitby, Albert E.	"Old Glory," the Flag of our Country	607	"	2.00	A. E. Maitby, Slippery Rock, Pa.
Marlowe, Christopher	Doctor Faustus	177	"	1.25	The Macmillan Co.
Meadowcroft, Wm. H.	The A. B. C. of the X Ray	217	"		American Technical Book Co.
Meizi, B. (Comp.)	The Scholar's A. B. C. of Electricity	272	B'ds	.50	
Moody, Wm. V.	New Italian-English Dictionary	408	Cloth	1.25	Hirshfeld Brothers.
Moore, H. K.	Grinn's Household Tales	20	Leather	.50	Houghton, Mifflin & Co.
Myer, Edmund J.	The Child's Piano-Forte Book	272	Cloth	1.25	C. Scribner's Sons, Importers.
Page, Emma E.	Position and Action in Singing	408	"	1.25	Edgar S. Werner.
Painter, F. V. N.	Heart Culture	210	"	1.00	Whittaker Ray Co.
Smith Jessie R.	Introduction to American Literature	294	"	1.75	Leach, Shewell & Sanborn.
Soulaby, Lucy H. M.	The Story of Washington	334	"	1.00	Beverly Harrison.
Spencer, F.	Stray Thoughts for Mothers and Teachers	325	"	1.35	Longman, Green & Co.
Tappan, Lucy	Chapters on Aims and Practice of Teaching	50	"	.60	The Macmillan Co.
Thatcher, Oliver J.	Topical Notes on American Authors	428	"	1.00	Silver, Burdett & Co.
Tuttle, Herbert B.	A Short History on Medieval Europe	178	"	3.00	C. Scribner's Sons.
Todhunter, I & Loney, S. L.	Chemistry at a Glance	358	Paper	1.10	Herbert B. Tuttle.
Williams, G. A.	Algebra for Beginners	43	Cloth	.25	The Macmillan Co.
Willis, J. C.	Topics and References in American History	44	"		C. W. Bardeen.
Wells, Webster	Flowering Plants and Ferns	118	"	1.20	The Macmillan Co.
Weineck, Oscar	Essentials of Algebra	372	"	1.30	Leach, Shewell & Sanborn.
Wood-Allen Mary.	First German Reader for N. Y. Public School	180	"	.30	Dyssen & Pfeiffer.
	Almost a Woman	372	"	.25	Wood-Allen Publishing Co.
Anderson, Jessie Macmillan	A Study of English Words	118	Cloth	.44	American Book Co.
Atwood, G. E.	School Algebra	97	Half Cloth	1.20	The Morse Co.
Baumbach, Rudolf	Die Nouns, eine Blau-Strumpf-Geschichte	180	Boards	.30	D. C. Heath & Co.
Baylis, Clara Kern	In Brook and Bayou	263	Cloth	.60	D. Appleton & Co.
Bryce, Hamilton A.	Horace's Quintus Horatius Flaccus	276	"	1.00	The Macmillan Co.
Carpenter, F. Ives	English Lyric Poetry, 1500-1700	254	"	1.50	C. Scribner's Sons.
Clarke, M.	The Story of Troy	253	"	.60	American Book Co.
Cooke, Frances R.	England	80	Boards	.35	D. Appleton & Co.
Deghucc, Joseph	Steiger's Colloquial Method of Learning the German Language	84	"	.50	E. Steiger & Co.
Deghucc, Joseph	Steiger's Commercial German Reader	164	Cloth	.25	Laird & Lee.
Grab, Max F. comp.	The Grimm Webster, German-English and English-German Dictionary	54	Boards	.75	The Macmillan Co.
Hallowell, Eliz. Moore	Elementary Drawing	27	paper	.12	D. C. Heath & Co.
Hatfield, James Taft	Materials for German Composition	251	Cloth	2.00	J. Wiley & Sons.
Everz and Jessie Hill, J. E.	Text-Book on Shades and Shadows and Perspective	177	boards	.35	D. Appleton & Co.
Krocker, Kate Freiligrath	Germany	203	Buckram	.80	D. C. Heath & Co.
Kupfer, Grace H.	Stories of Long Ago in a New Dress	311	Cloth	1.10	The Macmillan Co.
Lewis, Edwin Herbert	A First Book in Writing English	219	"	1.00	Ginn & Co.
Mace, W. H.	Method in History for Teachers and Students	290	"	1.10	D. C. Heath & Co.
Matzke, J. E.	First Spanish Readings	118	"	.40	The Macmillan Co.
Marchant, E. C. ed.	Thucydides	86	Boards	.25	The Macmillan Co.
Page, T. E.	Virgil Mars Publus	160	Cloth	1.25	D. C. Heath & Co.
Wells, B. W. comp.	Labiche's La Poudre Aux Yeux				
Wyatt, A. J.	An Elementary Old English Grammar				

Bay View, Michigan, summer school opens July 13.

Summer School of Languages, at Point o' Woods, Long Island. Address Prof. Chas. F. Kroeh, Stevens Institute of Technology, Hoboken, N. J.

New Schools of Methods in Public School Music. Eastern section at Hingham, Mass., August 3-19. Address American Book Company, Washington square, New York.

Benzonia College Summer School, July 6, continues six weeks. G. R. Wade, Colton, Mich.

Normal Chautauqua, E. Stroudsburg, July 5. G. P. Bible.

Philadelphia Summer School, July 6-30. D. C. Monroe, Philadelphia.

Baylor university summer school, at Waco, Texas, June 14 to August 6. W. H. Pool, Waco.

Virginia Summer School of Methods, in June. E. C. Glass, Lynchburg, Va.

Leland Stanford University, May 31. Stanford University, California.

The summer schools of Vermont are as follows: Barton, Address G. A. Andrews, Derby. St. Johnsbury, Address W. H. Taylor, Hardwick. Essex Junction, Address J. E. Allen, Westford. Randolph, Address Fred E. Prichard, Bradford. Middlebury, Address Thos. E. Boyce, Middlebury. Putney, Address H. D. Ryder, Bellows Falls. All these schools begin August 2 and continue two weeks.

Building Notes.

CALIFORNIA.

Fruitvale will issue \$10,000 bonds for school building purposes. Write Chas. W. Shoemaker, trustee.

Perris will erect frame school and assembly building at the Perris boarding school site. Write Edgar A. Allen, superintendent Indian Instruction school.

San Diego will build normal school on University Heights. Write J. L. Dryden, trustee.

CANADA.

Huntsville will build school-house. Write Mr. J. F. Waters, clerk.

GEORGIA.

Macon will erect an alumni hall for Mercer university; cost \$10,000. Write trustees.

ILLINOIS.

Bradley will build addition to school-house; cost \$2,500. Write Arch. C. D. Henry, Kankakee.

Chicago will erect school-house cor. of Forty-ninth street and St. Lawrence avenue; cost \$50,000.—will erect a twelve room building at Ninety-first street and Langley avenue; cost \$50,000.—will also build an addition to the Arnold school at Burling and Center streets; cost \$35,000. Write Arch. Norman S. Patton.—will build an addition to the Chicago normal school; cost \$85,000. Write Norman S. Patton, arch.

Clinton will build school-house. Write board of education.

Decatur will build addition to the German Catholic school; cost \$3,500. Write R. O. Rosen, arch.

Grandridge will build school-house; cost \$6,000. Write Arch. Ashby, Riverside.

Morgan Park will build school-house; cost \$14,000. Write Arch. M. L. Beers, 218 La Salle street, Chicago.

North Litchfield has issued \$3,000 for the building of a high school. Write board of education.

Paxton will build addition to school-house. Write Arch. N. S. Spencer, Champaign.

Quincy will build an addition to the Washington school. Write John Batschy, arch.

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Russellville will build school-house. Write Arch. J. W. Gaddis, Vincennes, Ind.

INDIANA.

Anderson will build addition to the Hazelwood school-house; cost \$3,000. Write Arch. Philip F. Jeckel, 5 and 6 P. O. blk.

Crawfordsville will build school-house. Write Archs. Kutsch & Laycock, 25-26 Cordova block, Indianapolis.

Elkhart will build addition to school-house. Write school board.

Elwood will erect a high school building; cost \$30,000. Write Arch. Philip F. Jeckel, 5 and 6 P. O. block, Anderson.

Haubstadt will build school-house. Write George D. Seitz, arch.

Knox will build two school-houses in Jackson township. Write S. R. Geddes, trustee.—will also build two school-houses in North Bend township. Write M. Kelley, trustee.

Notre Dame will erect a three story building at the university. Write Carpenter & Powderly, contractors.

Plainville will build school-house; cost \$6,000. Write Arch. J. W. Gaddis, Vincennes.

Poneto will build school-house. Write Arch. Cuno Kibele, Bluffton.

South Bend.—a parochial school will be erected here for St. Patrick's R. C. parish.

Valparaiso will build school-house in the 3rd ward. Write board of education.

Washington will erect high school

building. Write Archs. Kutsch & Laycock, 25-26 Cordova block, Indianapolis.

IOWA.

Allen will build school-house. Write J. B. Ross, secretary.

Bartlett will erect two school-houses. Write T. C. Harris, clerk.

Beaver will build school-house; cost \$3,200. Write board of education.

Castlegrove will build school-house in sub-district No. 6. Write Arch. J. W. Doxsee, Monticello.

Delmar will build addition to school-house. Write Wm. Hancock, contractor, Maquoketa.

Denison will erect a new school-house in sub-district No. 4, Otter Creek township. Write A. J. Boock, secretary.

Des Moines will build an addition to the Lucas school building. Write M. J. Coleman, secretary.

Estherville will build school-house. Write board of directors, Jack Creek township.—will erect two frame school-houses in Center township. Write A. Crim, clerk.—will build school-house in sub-district No. 6, Center township. Write James P. Kennedy.

Manchester will build school-house in sub-district No. 3. Write H. W. Woodward, president, Hazelgreen township.

Gilbert Station will build school-house in sub-district No. 7, district township of Milford. Write T. J. Sowers, president.

Hinton will build school-house in sub-district No. 6. Write P. E. Held, secretary.



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Massena will build school-house in Victoria township. Write H. R. Moore, secretary school board.

Milo will build school-house in Plainville district. Write J. S. Boyd, sec.

Morse will erect school-house in Graham township. Write F. A. Beranek, secretary.

Murray will build school-house in sub-district 5. Write Chas. Frank, president of board.

Nodaway.—Proposals will be received for making foundations under three school-houses in sub-districts Nos. 4, 8, and 10. Address Mr. P. W. Worley.

Pocahontas will build school-house in sub-district No. 8, district township of Center. Write Jas. Lehane, secretary.

Renwick will build school-house in district No. 5. Write C. F. Bootz, secretary.

Scotts Station will build school-house. Write John M. Wilson, chairman.

KENTUCKY.

Frankfort will build school-house. Write George G. Oberwarth, arch.

Louisville will build addition to the Parkland public school building. Write Robt. J. Frick, chairman, school board.—will also erect a new school-house; cost \$50,000. Write Arch. Mason Maury, 6th and Main streets.

Paducah will erect a high school building; cost \$30,000. Write Arch. Brinton B. Davis.

MAINE.

Pittsfield will build school-house. Write Arch. W. E. Mansur, Bangor.

Sangerville will build school-house in district No. 3. Write Fred E. Rollins, contractor.

MARYLAND.

Baltimore will build school-house. Write city council.

MASSACHUSETTS.

Boston will erect a parochial school on Sunnyside street; cost \$16,000. Write Rev. J. J. Williams, pastor.

Dedham will build school-house; cost \$50,000. Write board of education.

Everett will build school-house; cost \$18,000. Write board of education.

Malden will build school-house on Glenwood street; cost \$60,000.—will also build school-house on Wyoming avenue; cost \$15,000. Write board of education.

Marlboro will erect a new high school; cost \$65,000. Write board of aldermen.

Metheun.—E. F. Searles will give a new brick high school to the town.

North Chelmsford will erect a school building for the County Truant school. Write directors.

Revere will build school-house; cost \$30,000. Write Arch. Penn Varney, Lynn.

Salem will erect a new high school building; cost \$151,000. Write the aldermen.

Springfield will build addition to Jefferson avenue school; will receive bids for heating and ventilating said school.

Write B. Hammett Seabury, arch., Gill's block.—will build addition to Hooker school. Write F. R. Richmond, arch., Masonic Temple.—will receive bids for changing system of heating and ventilating in Emery street school.—also for installing a system of steam heating and ventilating in Strickland school. Write W. F. Tripp, chairman.

Upton will erect a new school-house; cost \$20,000. Write board of education.

Westfield will erect parochial school for St. Mary's church; cost \$20,000. Write Curtius G. Page, arch., Northampton.

West Springfield will build school-house; cost \$15,000. Write board of education.

Williamstown will erect a new high school building; cost \$31,000. Write Arch. E. A. Ellsworth, Holyoke.

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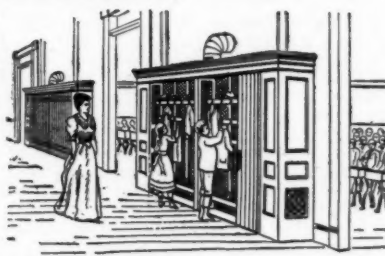
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A VOICE FROM THE WEST.

Prof. BOHMER, Principal of Jones' Commercial College, one of the largest institutions of the kind in the West, writes as follows: "Your book gives better satisfaction than any other I have ever had in my English department. The faculty of Jones' Commercial College unanimously pronounce the book the best published for use in business schools and colleges." He is using several hundred copies of

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the last shipment of fifty being forwarded in December, '96.

GOOD NEWS FROM HARRISBURG.

Prof. P. B. GIBSON, formerly Principal of Business Department of Harrisburg High School, writes as follows: "I have carefully examined and thoroughly tested the book in our classes here for the last six months, and find in it everything to commend and nothing to condemn. I unhesitatingly pronounce it the most valuable work of its kind for Business College use that has ever come under my observation. I have never used another book from which I received as good results as I do from yours, although I have been in the 'harness' for over nine years." SMITHDEAL'S GRAMMAR, SPELLER AND LETTER-WRITER is the best text-book of the kind ever published for High Schools, Business Colleges, and Advanced Students. Retail price, 75 cts.; introductory, 60 cts. Will be sent teachers on receipt of introductory price, and your money back if you want it. Address

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MICHIGAN.

Detroit will build school-house; cost \$30,000. Write Louis H. Chamberlin, secretary, 50 Miami avenue.

Holland will build addition to high school building. Write G. J. Van Duren, secretary.

Mt. Pleasant will build school-house and dormitory here. Write Andrew Spencer, superintendent Mt. Pleasant Indian Industrial school.

Pontiac.—A parochial school-house will be erected here. Rev. Fr. T. J. Ryan, pastor. Write Archs. Fisher Bros., Crofoot building.

St. Joseph will build school-house. Write Geo. E. Smith, secretary.

MINNESOTA.

Ada will build addition to school-house. Write S. Peterson, clerk.

Duluth will receive bids for heating and ventilating the Cleveland school building. Write board of education.

Clinton will build school-house. Write Mr. T. W. Collins, secretary.

Minneapolis will build ladies' dormitory for state agricultural school; cost \$18,950. Write P. N. De Laney, contractor.

Spring Valley will build school-house in district No. 102, Fillmore Co. Write L. H. Osterud, arch.

Waterville will build addition to school-house; cost \$3,500. Write C. S. Sedgwick, Lumber Exchange, Minneapolis.

Winnebago City will erect high school building. Write J. E. Damon, clerk.

MISSISSIPPI.

Jackson will erect high school building; cost \$15,000. Write Arch. J. W. Gaddis, Vincennes, Ind.

The New York Central Railroad Company will sell regular round trip ticket, New York to Chautauqua, with stop over at points desired en route, good up to and including Oct. 31, for \$18.50; continuous passage tickets will be sold for \$17. They also announce a special excursion from New York to Chautauqua and return, to leave August 2 and return August 9 to September 1, for \$10 for the round trip.

Publishers' Notes.

There is a great deal of truth in the saying that beauty is but skin deep, for what perfection of features or form can atone for a blotchy, freckled, or otherwise disfigured complexion. The ladies know this, and therefore they strive to preserve and improve the beauty of the skin. Many of them use that famous preparation Dr. T. Felix Gouraud's Oriental Balm; it has been on the market forty-eight years, which ought to be a pretty good test of its merit. It purifies as well as beautifies the skin. It may be obtained of druggists and fancy goods dealers or of Ferd. T. Hopkins, proprietor, 37 Great Jones street, N. Y.

If the teacher wishes to increase his or her knowledge of this glorious land of ours from personal observation, no better plan could be pursued than to map out some routes over the Pennsylvania railroad and its connections. The railroad crosses one of the most picturesque portions of the country; this and its connections cover about all that is worth seeing in the northeastern section of the United States and the eastern provinces of Canada. Description of towns, notable scenery, etc., and routes, time tables, a map and all necessary information are contained in a book of over two hundred pages entitled "Pennsylvania Railroad Summer Excursion Routes." For those who wish to spend the vacation traveling, this book is indispensable. As a specimen of high-class printing it is superb. The front cover has a handsome colored picture, with the title of the book in embossed gilt letters, and the other cover is equally as handsome. Through the pages are half-tone pictures of As-

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The Chautauqua program will lay emphasis next summer upon pedagogical topics. The school of pedagogy, under the charge of Pres. W. L. Hervey, of Teachers' college, New York, will offer a wide range of courses in psychology, general methods, and special applications. The opening address will be delivered by Prof. H. B. Adams, of Johns Hopkins, on "The Study and Teaching of History." Special lectures will be given by Pres. G. Stanley Hall, Mr. Franklin T. Baker, Prof. W. L. Bryan, Prof. H. B. Adams, Pres. Hervey, and others. Conferences of parents and teachers will also be organized, with a view to securing the intelligent interest of fathers and mothers in the improvement of our educational system.

Chautauqua Recognition day will be Aug. 18, and the address to the graduating class of 1897 in the Chautauqua Literary and Scientific Circle will be delivered by Pres. J. F. Goucher, of Baltimore college for women.

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Sermons will be preached at Chautauqua in 1897 by Pres. William DeWitt Hyde, Rev. E. Winchester Donald, Rev. W. V. Kelly, Rev. Graham Taylor, Bishop C. C. McCabe, Rev. J. C. MacKenzie, Bishop John H. Vincent, and Rev. Willis P. Odell.

The Foe of Foul Air and Disease.

For a long time it has been known that the balsamic perfume exhaled by pine trees was beneficial to weakened lungs, but it was only recently that the cause was explained. The hygienic influence of the blue gum tree of Australia (eucalyptus globulus) and camphor has also long been known. The clue to explain the cause of this phenomena was furnished by Kingzett as a result of a discovery which, like many others of great practical value to mankind, grew out of a purely scientific investigation. He believed that plants do not produce ozone, as some suppose, but peroxide of hydrogen, and he undertook a series of experiments to clear up this moot point in natural chemistry. From these experi-

ments followed his great discovery of the antiseptic qualities of peroxide of hydrogen, the identification of the purifying power of the pine, eucalyptus, and camphor trees, and the invention of a method of preparation, which brings their total healthful principles within the reach of the public. The two chief preparations are fluid and oil. The first of these is a watery solution, containing peroxide of hydrogen, camphoric acid, soluble camphor, thymol, etc., while the oil contains a great quantity of camphoric peroxide. To these products, in common with others since discovered, the fancy name of "Sanitas" has been given, and this has been registered as the trade-mark of the American and Continental "Sanitas" Co., Limited, 636 West 55th street, New York. The Sanitas oil brings the balsam of the pine woods to the patient's home, thus placing the curative properties of nature's restorer within the reach of all. It is used by inhaling the vapor, or by applying it to the throat and nostrils by means of an atomizer. The other "Sanitas" preparations consist of powder, soaps, toilet, and veterinary preparations. For a more complete account of the state of scientific knowledge regarding this subject, readers are referred to "Nature's Hygiene," a systematic manual of natural hygiene, by C. T. Kingzett, F. I. C., F. C. S., vice-president of the Society of Public Analysts, England.

Summer Time Table on the West Shore Railroad.

The West Shore Railroad summer schedule will go into effect Sunday, June 27th, 1897. There will be many important changes and additions. The through car service between Washington, Baltimore, Philadelphia, Asbury Park, Long Branch, Jersey City, and Catskill Mountains, Saratoga, and Lake George, will be shown in the new schedule.

There will be many improvements in the new service, and the time of several through trains has been greatly reduced.

The popular Rip Van Winkle Flyer will leave New York as usual, at 10.45 A. M., making a very fast run through to the Catskills, without change of cars.

The Saturday Half-Holiday Express will leave New York at 1.00 P. M., and reach the principal Catskill Mountain points in time for supper.

There has also been added a sleeping car, which will leave New York on the 3.15 A. M. train, reaching the Catskill Mountains in time for breakfast Sunday morning. The sleeper can be entered at 9.00 P. M. Saturday night.

A return train will leave Catskill Mountain points late Sunday night, arriving in New York early Monday morning in time for business. This train will be appreciated and considered a great accommodation by business men who cannot leave New York early on Saturday afternoon, permitting them to spend Sundays with their families in the Catskill Mountains.

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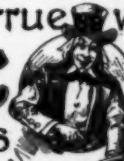
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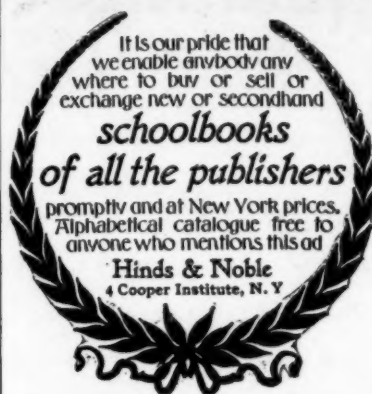
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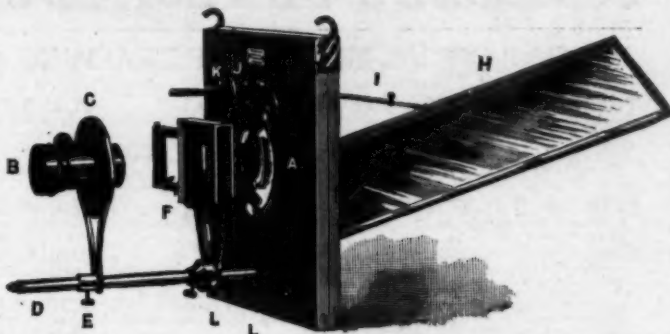
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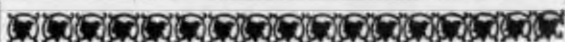
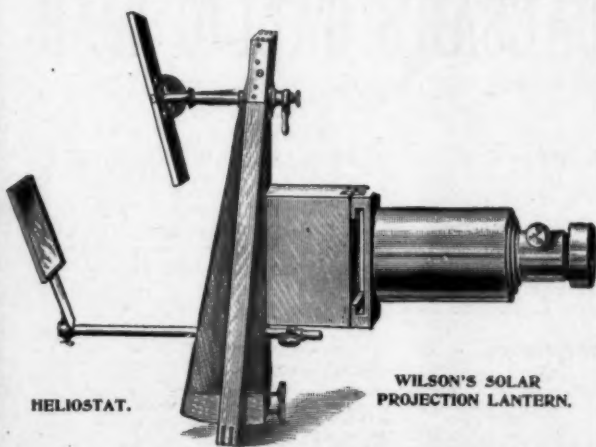
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